DOCUMENT RESUME

ED 356 123 RC 019 082

AUTHOR	Spohn, Karen; And Others
TITLE	Appalachian Access and Success: A Research Project of the Ohio Board of Regents and a Consortium of Two- and Four-Year Colleges and Universities in Appalachian Ohio.
INSTITUTION	Advanced Education Research Center, Tustin, CA.; Shawnee State Univ., Portsmouth, OH.
SPONS AGENCY	Ohio Board of Regents, Columbus.
PUB DATE	Oct 92
NOTE	283p.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01/PC12 Plus Postage.
DESCRIPTORS	*Access to Education; *College Attendance; Consortia; *Counselor Attitudes; *Family Characteristics; Higher Education; High Schools; High School Seniors; Institutional Characteristics; Nontraditional Students; *Regional Characteristics; Rural Areas; *Student Attitudes; Surveys
IDENTIFIERS	Appalachia; Ohio

ABSTRACT

The Appalachian Access and Success project aims to examine the factors that underlie the low level of participation in higher education in the Ohio Appalachia region. Surveys were conducted with the 1992 high school seniors, their parents, their school staff, and a group of nontraditional students who entered college after the age of 25. Section I of this report presents a profile of the high school seniors in Ohio Appalachia. It analyzes seniors' perceptions of their individual characteristics, familial influences, and institutional influences. Section II examines familial and parents' influences by comparing parental perceptions and the perspectives of the seniors. Section III examines the institutional factors influencing the decision to attend college. The perceptions of institutional factors are compared to those of both students and parents. Section IV focuses on nontraditional students in the region, describing their attributes and motivation, academic achievement, family and institutional influences, and their perceived barriers to higher education. Section V of the report examines the influence of regional economic and demographic characteristics on participation in higher education. Section VI and section VII present respectively, conclusions based on the findings of research and the conclusions and recommendations of the project director. Six appendices forming nearly half the report provide: (1) a list of consortium members; (2) survey results tables; (3) various other tables; (4) a list of schools and colleges surveyed; (5) survey instruments; and (6) samples of access programs currently in use. (Contains 84 references.) (KS)

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A Research Project of the
Ohio Board of Regents and a
Consortium of Public Colleges and Universities
in Ohio Appalachia

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APPALACHIAN ACCESS AND SUCCESS

A Research Project of the
Ohio Board of Regents and a Consortium
of Two- and Four-Year Colleges and Universities
in Appalachian Ohio

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October 1992

Preferred Citation

Tim Crowther, Dewey Lykins, and Karen Spohn, "Report of the Appalachian Access and Success Project to the Ohio Board of Regents," Athens/Portsmouth: Institute for Local Government Administration and Rural Development, Ohio University/Shawnee State University, 1992.

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ACKNOWLEDGEMENTS

As director of the Appalachian Access and Success Project, I am grateful for the patience and assistance of the many people who made it possible to complete the tasks involved with this project. I appreciate the time and effort of the presidents (or their designees) of the participating colleges and universities--without their collective willingness to address the access problem, this project would not have happened. Also, the staff members at each of the consortium institutions were invaluable in helping me gather information. I thank those staff members for doing additional work in order to facilitate this project. I want to commend the public school administrators and staff throughout Appalachian Ohio for their willingness to help their students by agreeing to participate in project activities--that willingness is an indication of their genuine concern for the success of their constituents. For his efforts in obtaining project funding and nurturing a collaborative approach, I am indebted to Dr. William Napier, Vice-Chancellor of the Ohio Board of Regents. I am also indebted to funding and resources provided by the Rural Universities Project at Ohio University and Shawnee State University.

The staff of ILGARD--Karen Spohn, Tim Crowther, Michael Finney, Missy Freeman, and graduate students Monica Williams, Sarah Howard, and Karla Aldinger, who have worked through numerous adverse situations to complete the research phase of this project. I appreciate their willingness not only to fulfill ILGARD's contractual obligations, but also to assist me in other activities. I appreciate the professionalism of those staff members and I have enjoyed the working relationships which evolved during the project. I would also like to thank the faculty review committee--David Dabelko, Michael Mumper, William Inman, and Ismail Ghazalah, who critiqued the draft research report.

The final acknowledgement I give is to Dr. Clive Veri, President of Shawnee State University. Dr. Veri has been both a valuable advisor and a significant motivator throughout the project period. Dr. Veri's vision for the success of Appalachian Ohio would never allow me to doubt that this project would lead to improving the lives of residents in the region.

While I acknowledge the efforts of these people, we know that too little has yet been accomplished. A problem has been identified and recommendations offered. The real success of this project will be determined by the actions in the future, when the lives of the residents of Ohio's Appalachian counties are improved by making higher education more accessible.

C. Dewey Lykins, Director
Appalachian Access and Success Project

This research report was prepared by the Institute for Local Government Administration and Rural Development (ILGARD) in conjunction with the ***Appalachian Access and Success*** *project director for the Consortium of two- and four-year colleges in Ohio Appalachia. It provides an analysis of the barriers to, and influences on, access to higher education in the Ohio Appalachia region. The report examines individual, familial, institutional, and regional factors, with the aim of identifying points of intervention to improve access rates.*

Eighty percent of Ohio Appalachia high school seniors surveyed in the fall of 1991 stated that they wanted to attend college. Only one-third of this same group is likely to enroll in college the following fall. The higher education participation rate for the region is substantially lower than that for both Ohio, 53.8 percent of high school seniors, and for the United States, 62.4 percent.

Having suffered from structural changes during the last two decades, the Ohio Appalachia economy must be revitalized. To do so requires that the region's population be sufficiently well educated to meet the rising demands of the labor market.

This report is the research phase of the **Appalachian Access and Success** project. To examine the influences on participation, four groups were surveyed: high school seniors, their parents, the personnel at their high schools, and a group of nontraditional students who had graduated from high schools in the Ohio Appalachia region and entered higher education after the age of 25. In addition, the region's economic and demographic characteristics were analyzed.

The results confirm the existence of barriers very similar to those found in other studies of educational participation. The major findings related to barriers to access are presented as follows:

Individual Influences

Individual influences include the high school students' academic ability, aspirations, and expectations. Barriers identified include the following:

- high actual cost of higher education, and the desire on the part of students to earn an immediate income;
- perceived high cost of higher education--seniors tend to overestimate the cost of college;
- lack of information about college costs and financial aid availability. Seniors are unclear about exactly how they will finance their college education;
- low self-esteem: only a very small proportion of high school seniors regard themselves as above average intelligence--some worried that they would not fit in to college, others felt that poor grades in high school would prevent them from gaining a college education;
- lack of information about college educational programs;
- lack of information about the skills required in the labor market.

Familial Influences

Familial factors include the family's three functions as resource providers, role models, and encouragers of higher education. Barriers related to the family include the following:

- low level of parental educational attainment. Parents without college experience are less able to help their children with the complex college and financial aid application processes and cannot act as role models for the benefits of higher education;
- low average family incomes. Family income is one of the most reliable predictors of educational attainment;

- parents' inability to save for their children's college education;
- lack of siblings who have attended college and could provide role models.

Institutional Influences

Institutional factors cover the role of high school personnel--teachers, counselors, and others--as promoters of higher education and informational resources. Barriers in the school include the following:

- high school personnel are dissatisfied with the information being provided to them by area colleges on college costs, financial aid availability, college entrance requirements, and academic expectations. Without this information, they are limited in the help they can offer to students;
- high school personnel do not think that most of their students are educationally prepared for college, although they do think that most of them should attend college. They are thus less likely to encourage the option of college for those they do not consider capable of success;
- high school personnel, although they acknowledge the importance of parental influence, believe lack of parental encouragement to be a major barrier to college enrollment.

Regional Influences

The economic and demographic characteristics of Ohio Appalachia as pertaining to educational participation are significant regional influences. While the regional influences examined may not be barriers in and of themselves, they are indicative of the lack of an environment supportive of higher education. They also demonstrate the necessity of revitalizing the regional economy, a task which is inextricably linked to improving the educational attainment of the region's population. Factors of interest in the regional economic and demographic environment include the following:

- significantly lower per capita and family incomes than Ohio and the United States;
- higher unemployment than in Ohio;
- a concentration of poverty in Ohio Appalachia;
- job losses in the well-paid mining and manufacturing sectors, which have been replaced with lower paying retail and service sector jobs;
- higher outmigration than Ohio in the 20-34 year old age group, particularly in those counties that have suffered from large losses of employment;
- the declining size of the traditional college-age population due to demographic shifts, thereby creating an incentive for area colleges to increase recruitment efforts;
- higher dependency ratios than Ohio. Thus, there are more economically non-productive individuals as a proportion of the economically productive segment of the population.

Conclusions

The increasingly complex society in the United States is demanding ever higher levels of knowledge and skills from its citizens, both in the labor force and in everyday life. Whether seen from a moral perspective on equality of opportunity or from a functional perspective on the necessity of an adequately educated labor force, the low rate of higher education participation in Ohio Appalachia is therefore of great concern.

In the fall and winter of 1991, 80.0 percent of high school seniors surveyed in Ohio Appalachia stated that they wanted to go to college.[1] The actual participation rate is probably closer to one-third of graduating high school seniors.[2] Over the previous six years, however, the rate of high school students in the region entering higher education after high school graduation--as estimated by school district personnel--was 43.4 percent (table 0.1 and figure 0.1). Local educational experts in the region believe even this figure to overestimate the proportion of high school students continuing on to higher education by approximately 12.0 percent.

This discrepancy between educational aspirations and actual participation is not unique to Ohio Appalachia. The magnitude of the gap, however, is much greater than other regions of the state and the nation. Actual participation rates are significantly lower than both Ohio and national averages. The average estimated higher education participation rate for Ohio as a whole over the same period is 53.8 percent, although this figure is also likely to overestimate the actual participation rate. Although current data are not available on participation rates for each state, in 1980 Ohio was thirty-third in terms of the percentage of students enrolled in higher educational institutions as a proportion of the total population.[3]

---

[1] "Higher education" and "college" are used interchangeably in this report. Higher education is defined to include all two- and four-year colleges, technical colleges, community colleges, and branch campuses, public or private.

[2] See the discussion of how participation rate estimates are derived, page 22.

[3] Kathy L. Stafford, Sven B. Lundstedt, and Arthur D. Lynn, Jr., "Social and Economic Factors Affecting Participation in Higher Education," Journal of Higher Education 55 (September/October 1984): 592.

TABLE 0.1
ESTIMATED PERCENTAGE OF HIGH SCHOOL GRADUATES PARTICIPATING[a] IN HIGHER EDUCATION

REGION	90-91	89-90	88-89	87-88	86-87	85-86	85-91 Av.	State Rank	App. Rank
Ohio	59.0	56.3	54.4	53.4	51.0	49.0	53.8	-	-
Appalachia	49.3	45.5	45.0	42.3	39.6	38.8	43.4	-	-
Adams	46.1	37.3	36.4	30.5	31.6	32.3	35.7	85	27
Athens*	65.5	57.5	51.4	53.7	48.3	47.3	53.9	21	2
Belmont*	65.7	58.5	56.4	46.7	47.6	40.9	52.6	28	3
Brown	45.7	40.1	35.2	31.0	34.8	31.0	36.3	84	26
Carroll	40.2	50.4	40.0	38.7	43.4	33.2	40.9	78	20
Clermont	48.4	51.6	49.3	48.2	43.7	39.9	46.8	48	7
Columbiana	52.8	43.6	41.4	44.0	44.2	39.5	44.2	68	16
Coshocton*	44.0	46.9	57.3	45.5	40.3	42.5	46.0	51	8
Gallia	56.7	37.8	41.8	48.5	43.7	43.3	45.3	59	11
Guernsey*	58.0	52.4	43.6	43.3	46.3	41.7	47.5	46	6
Harrison	50.3	41.5	57.4	46.2	37.0	38.7	45.1	62	13
Highland	35.3	45.6	40.0	39.7	30.7	34.3	37.6	82	24
Hocking	47.8	39.1	50.5	49.9	50.0	29.4	44.4	67	15
Holmes	38.6	41.1	35.4	36.4	38.1	52.0	40.2	79	21
Jackson	45.5	45.7	44.3	39.6	43.2	40.8	43.1	72	17
Jefferson*	57.9	56.5	60.9	55.8	49.4	50.3	55.1	21	1
Lawrence*	41.8	40.3	43.3	37.3	35.5	31.0	38.2	81	23
Meigs*	47.4	47.3	45.9	45.3	45.0	40.4	45.2	60	12
Monroe	48.8	46.6	46.8	45.9	45.3	34.2	44.6	66	14
Morgan	30.6	29.9	43.4	41.8	24.7	-	34.0	86	28
Muskingum*	50.8	46.4	46.4	38.4	36.4	37.0	42.5	75	19
Noble	57.5	54.6	40.5	36.5	30.7	35.8	42.6	73	18
Perry	47.9	44.9	38.2	41.7	32.6	31.7	39.5	80	22
Pike*	41.8	40.8	38.3	35.6	34.2	28.7	36.5	83	25
Ross*	45.6	49.2	48.3	47.8	41.6	41.4	45.6	56	9
Scioto*	47.7	52.6	42.5	44.6	39.6	45.9	45.4	58	10
Tuscarawas	56.3	50.0	49.3	46.9	41.7	41.4	47.6	47	5
Vinton*	45.6	34.9	33.5	24.0	17.8	38.2	32.6	88	29
Washington	69.6	37.0	47.1	41.8	49.6	44.0	48.1	42	4

* County selected for the survey

Source: Ohio Department of Education, Form OCCD-7S, 1986-1991 (Columbus, Ohio: Ohio Department of Education, 1986-1991).

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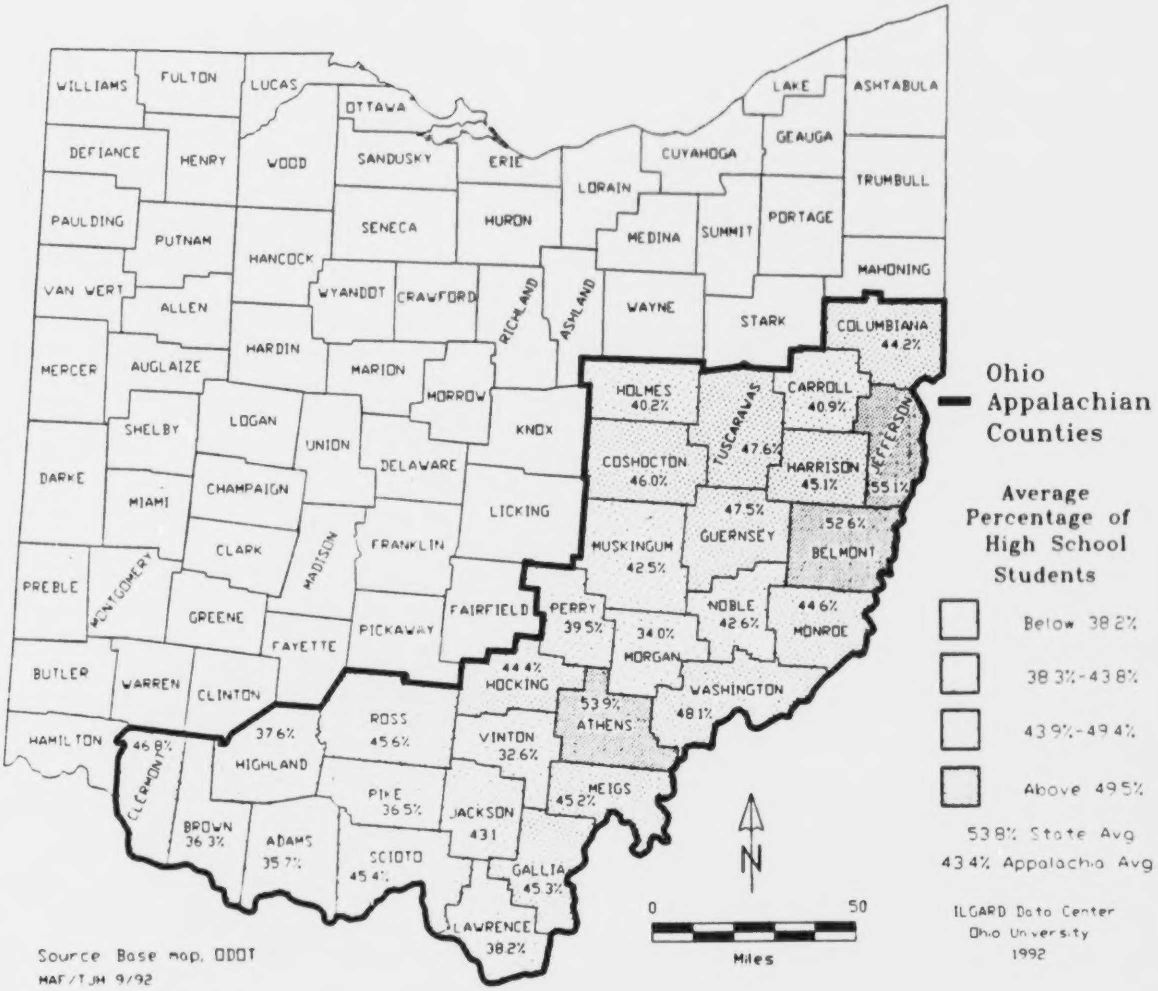
[a] See page 22 for a discussion of how the participation rate is derived.

FIGURE 0.1
ESTIMATED PERCENTAGE OF HIGH SCHOOL GRADUATES IN OHIO APPALACHIA PARTICIPATING IN HIGHER EDUCATION


WILLIAMS
FULTON
LUCAS
OTTAWA
LAKE
ASHTABULA
DEFIANCE
HENRY
WOOD
SANDUSKY
ERIE
CUYAHOGA
GEAUGA
TRUMBULL
LORAIN
PAULDING
PUTNAM
SENECA
HURON
MEDINA
SUMMIT
PORTAGE
HANCOCK
MAHONING
VAN WERT
WYANDOT
CRAWFORD
RICHLAND
ASHLAND
WAYNE
STARK
ALLEN
COLUMBIANA 44.2%
HARDIN
MERCER
AUGLAIZE
MARION
MORROW
HOLMES 40.2%
CARROLL 40.9%
SHELBY
LOGAN
UNION
KNOX
TUSCARAWAS 47.6%
JEFFERSON 55.1%
DELAWARE
COSHOCTON 46.0%
HARRISON 45.1%
DARKE
MIAMI
CHAMPAIGN
LICKING
CLARK
MADISON
FRANKLIN
MUSKINGUM 42.5%
GUERNSEY 47.5%
BELMONT 52.6%
PREBLE
MONTGOMERY
GREENE
FAIRFIELD
PERRY 39.5%
NOBLE 42.6%
MONROE 44.6%
FAYETTE
PICKAWAY
MORGAN 34.0%
BUTLER
WARREN
CLINTON
HOCKING 44.4%
WASHINGTON 48.1%
ATHENS 53.9%
HAMILTON
CLERMONT 46.8%
HIGHLAND 37.6%
ROSS 45.6%
VINTON 32.6%
MEIGS 45.2%
PIKE 36.5%
JACKSON 43.1
BROWN 36.3%
ADAMS 35.7%
SCIOTO 45.4%
GALLIA 45.3%
LAWRENCE 38.2%
N
0
50
Miles
Ohio Appalachian Counties
Average Percentage of High School Students
Below 38.2%
38.3%-43.8%
43.9%-49.4%
Above 49.5%
53.8% State Avg
43.4% Appalachia Avg
ILGARD Data Center
Ohio University
1992

Source: Base map, ODOT
MAF/TJH 9/92

Source: Ohio Department of Education, Form OCCD-7S, 1986-1991 (Columbus, Ohio: Ohio Department of Education, 1986-1991).

In comparison to the nation, Ohio Appalachia looks even worse. Across the United States, participation in higher education has been rising steadily for the last 30 years. The percentage of 1991 high school graduates estimated to have enrolled in higher education institutions in the fall following graduation is 62.4 percent.[4]

Appalachia's comparatively low access rate is disturbing if only because it reflects educational opportunities that are being denied to the region's residents. However, from an economic perspective, the resulting low level of education has deeper ramifications. Higher education is part of the system that provides individuals with the skills required to be successful in the labor market, thus allowing them to attain a satisfactory level of economic welfare as well as contributing to the regional economy. If individuals are not sufficiently well-educated to meet the demands of the labor market, not only will they themselves suffer economically, but the strength and dynamism of the regional economy will also be compromised.

"Of course, higher education is expected to do much more than provide the economy with skilled manpower," but the economic reality is that "higher education and the labor market have developed partly in response to each other."[5] The link between the educational level of the population and the strength of the regional economy is particularly pertinent in the case of Ohio Appalachia. Over the last decade, the region has undergone, and continues to experience, structural changes with serious and wide-ranging effects. Semiskilled and unskilled jobs that offer relatively high wages are disappearing. They are being replaced primarily with lower wage positions. Individuals with lower skill levels are bearing the brunt of the transposition.

---

[4] Bureau of Labor Statistics, Proportion of High School Graduates Sets New Record, US DL 92-395 (Washington, DC: U.S. Department of Labor, Bureau of Labor Statistics, June 30, 1992).

[5] Robert M. Lindley, "Introduction," Higher Education and the Labor Market, Research into Higher Education Monographs, ed. Robert M. Lindley (Guilford, England: The Society for Research into Higher Education, 1981), 1.

The changes in the Ohio Appalachia economy are the result of the transformation of the national economy:

> The past two decades have witnessed a change from an industrial to an information economy. Accompanying this shift has been a dramatic increase in the rate of technological change, in the internationalization of the economy, and increased competitiveness.[6]

Ohio Appalachia, in particular, is experiencing the negative effects of these changes. Like many other rural areas in the United States, the regional economy was traditionally highly dependent on natural resources and manufacturing industries. These are the sectors now declining in importance and in which the United States has lost competitiveness:

> Rural America is at a crossroads in its economic development. Like peripheral regions of other First World nations, the traditional economic base is deteriorating. Natural resources . . . show little prospect for generating future job growth, and manufacturing, which once heralded the antidote to overdependence on natural resources, is a new source of instability.[7]

Rural America, including Ohio Appalachia, is suffering disproportionately from this structural economic change; income growth in rural areas is once more lagging behind that in urban and suburban regions.[8]

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[6] James S. Fairweather, Entrepreneurship and Higher Education: Lessons for Colleges, Universities, and Industry, ASHE-ERIC Higher Education Report no. 6 (Washington, DC: Association for the Study of Higher Education, 1988), 2.

[7] Amy K. Glasmeier, The New High Tech Potential: Economic Development in Rural America (New Brunswick: Center for Urban Policy Research, Rutgers University, 1991), 1.

[8] Ibid., 12.

The vulnerability of the Ohio Appalachia economy can be demonstrated by a simple example. Whereas only 28.9 percent of employment nationwide was in mining or manufacturing industry at the beginning of the 1980s, 35.3 percent of employment in Ohio Appalachia was concentrated within these two sectors.

Employment in these two sectors fell nationwide during the 1980s. The proportional losses in Ohio Appalachia were, however, much greater (appendix III table V.5 and V.5A). The negative effect of this on the region was compounded by the sectors' greater strategic importance to the economy. Mining employment decreased by 49.7 percent between 1980 and 1989, while manufacturing employment fell by 11.7 percent.

The number of jobs in the regional economy grew over this period at a rate comparable to that of the nation: 3.9 percent compared to 3.8 percent respectively (appendix III table V.4). The only sectors where employment growth occurred, however, were retail trade and services. The majority of jobs in both of these sectors offer comparatively low wages. Employment lost in mining and manufacturing, in comparison, was predominantly high wage (appendix III, tables V.11-V.12, wage data).

When the economy offered a large number of high-paying jobs for semiskilled or unskilled workers, the link between educational attainment and economic well-being was less clear. As the industrial structure has changed, however, high-wage employment opportunities for those with lower education and skill levels have become increasingly scarce.[9] For Ohio as a whole, and particularly in Ohio Appalachia, structural change has created

> a mismatch between a large pool of displaced unskilled and semi-skilled blue collar workers and the relatively higher skill demands of those emerging jobs in other economic sectors that provide good compensation levels.[10]

Continuing low levels of participation in higher education will only add to the size of the unskilled and semiskilled labor pool for which demand is declining.

Analysts have noted the increasing "educational orientation of the evolving economy, including the need for enhanced human capital."[11] Unskilled and semiskilled employment is declining under the influence of the combined effects of "recession, international competition, automation, and the flight of unskilled assembly work to nations with a cheaper labor force."[12]

Education and literacy are becoming ever more important in the labor market.[13] Communication and analytical skills in particular are increasingly valued in the workplace, as is a knowledge of science.[14] The labor force, however, increasingly lacks the requisite skill levels in these areas:[15]

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[9] Gordon Berlin and Andrew Sum, Toward a More Perfect Union: Basic Skills, Poor Families, and Our Economic Future, Ford Foundation Project on Social Welfare and the American Future, Occasional Paper no. 3 (New York: Ford Foundation, February 1988), 13.

[10] Council for Economic Opportunities in Greater Cleveland, Ohio 1991 Poverty Indicators. Trends: 1970-1991, vol. 6 (Cleveland: CEOGC, 1991), 85.

[11] Fairweather, 3; see also Richard Hersh, "Education and the Corporate Connection," Educational Horizons 62, no. 1 (Washington: Association for the Study of Higher Education, 1983), 5-8.

[12] Elizabeth L. Useem, Low Tech Education in a High Tech World: Corporations and Classrooms in the New Information Society, Issues in Science and Technology Series, American Association for the Advancement of Science (New York: Free Press, 1986), 4.

[13] Berlin and Sum, 9.

> Employers in all occupational sectors claim that many of the graduates of the nation's schools and colleges have significant deficiencies in communications and critical thinking skills.[16]

The labor market is demanding higher levels of skill and education for jobs at all levels. It is predicted that during the remainder of the 1990s, over 50 percent of all jobs will require a postsecondary education.[17]

In light of the changing labor market, the fact that only one-third of the Ohio Appalachia region's high school students are gaining a higher education is highly significant. If the region cannot increase levels of higher educational access, its ability to revitalize the economy will be severely hampered by human capital deficiencies. Stafford, Lundstedt, and Lynn observe that regions

> experiencing poor economic circumstances may need to make major changes in order to revitalize the economy. Low participation in higher education as it relates to the provision of a trained work force can significantly condition the degree to which change is possible.[18]

A vicious cycle exists: low levels of educational attainment and skills in a region compromise attempts to solve the economic problems being faced.

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[14] Ibid.

[15] Ibid., 21.

[16] Ibid., 3.

[17] Center for Rural Pennsylvania, Rich Schools, Poor Schools: Challenges for Rural and Urban Pennsylvania (Harrisburg: Center for Rural Pennsylvania, July 1991), introduction.

[18] Stafford, Lundstedt, and Lynn, 607.

Ohio Appalachia is caught in a trap comprised of low levels of education and skills in the population combined with debilitating structural economic change. A prerequisite for economic revitalization is a more highly-educated labor force. High technology industry, for example, is often touted as the solution for rural economic decline, but, "the availability and skills of a labor force ranked first among [high tech] firms' locational considerations."[19] A region with an insufficiently educated and skilled labor force is therefore uncompetitive.

If participation in higher education continues at such low rates in Ohio Appalachia, the region will be unable to attract and retain the types of employment it needs to regain its economic health. Although the region has in the past been able to rely on low labor costs as a locational incentive, this is no longer enough. The importance of labor skills now outweighs that of labor costs.

Ohio Appalachia must break out of this vicious cycle. To do this requires increasing the educational attainment of its residents while simultaneously providing employment that will utilize their higher skill levels and generate renewed prosperity for the region.

THE "ACCESS AND SUCCESS" PROJECT

In recognition of these problems and their long-term ramifications for the economic well-being of Ohio Appalachia, a consortium of two- and four-year colleges in the region was formed (appendix I; figure 0.2 also shows the location of the consortium members within Ohio Appalachia). Primary among the consortium's concerns are the low enrollment rate in higher education among high

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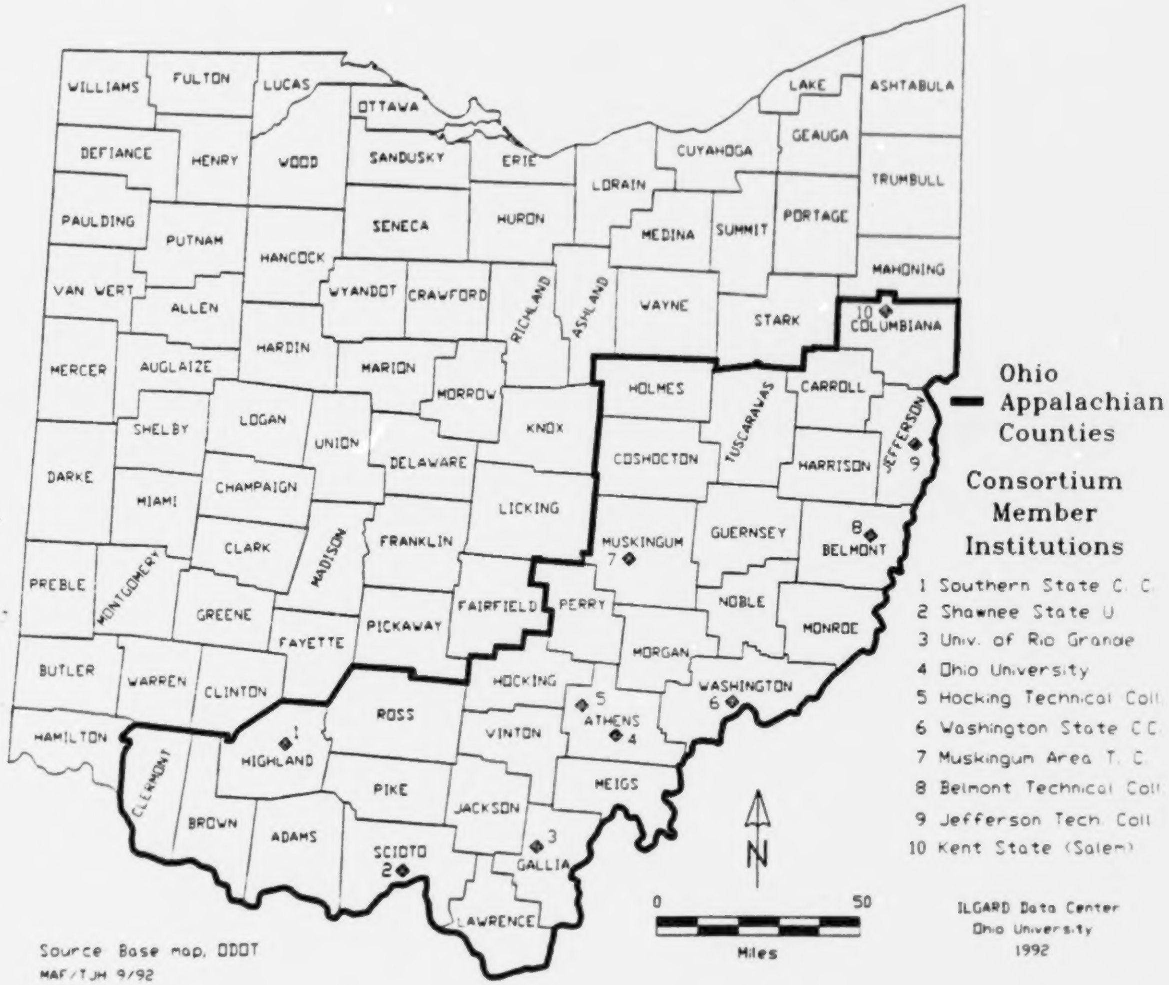
[19] Useem, 21.

FIGURE 0.2
THE OHIO APPALACHIA REGION, SHOWING THE LOCATION OF CONSORTIUM MEMBERS


Ohio Appalachian Counties
Consortium Member Institutions
1 Southern State C. C.
2 Shawnee State U
3 Univ. of Rio Grande
4 Ohio University
5 Hocking Technical Coll
6 Washington State C.C.
7 Muskingum Area T. C.
8 Belmont Technical Coll
9 Jefferson Tech. Coll
10 Kent State (Salem)
WILLIAMS
FULTON
LUCAS
OTTAWA
LAKE
ASHTABULA
DEFIANCE
HENRY
WOOD
SANDUSKY
ERIE
LORAIN
CUYAHOGA
GEAUGA
TRUMBULL
PAULDING
PUTNAM
HANCOCK
SENECA
HURON
MEDINA
SUMMIT
PORTAGE
MAHONING
VAN WERT
ALLEN
WYANDOT
CRAWFORD
RICHLAND
ASHLAND
WAYNE
STARK
COLUMBIANA
MERCER
AUGLAIZE
HARDIN
MARION
MORROW
HOLMES
CARROLL
SHELBY
LOGAN
UNION
KNOX
TUSCARAWAS
JEFFERSON
DARKE
MIAMI
CHAMPAIGN
DELAWARE
COSHOCTON
HARRISON
LICKING
CLARK
MADISON
FRANKLIN
MUSKINGUM
GUERNSEY
BELMONT
PREBLE
MONTGOMERY
GREENE
FAYETTE
PICKAWAY
FAIRFIELD
PERRY
NOBLE
MONROE
BUTLER
WARREN
CLINTON
MORGAN
HOCKING
WASHINGTON
HAMILTON
CLERMONT
HIGHLAND
ROSS
VINTON
ATHENS
BROWN
ADAMS
PIKE
JACKSON
MEIGS
SCIOTO
GALLIA
LAWRENCE
N
0
50
Miles

Source: Base map, ODOT
MAF/TJH 9/92

ILGARD Data Center
Ohio University
1992

school graduates in the region and its effects on Ohio Appalachia's human resource base and economic development potential.

In 1991, the **Appalachian Access and Success** project was initiated as a result of the collective efforts of the presidents of the colleges in the consortium, area legislators, and the Ohio Board of Regents. The project aims to examine the factors that underlie the low level of participation in higher education in Ohio Appalachia. By gaining a better understanding of the unique factors that influence higher education participation in the region, strategies can be developed to overcome existing barriers to access.

The **Appalachian Access and Success** project is funded by the Ohio Board of Regents and the Rural Universities Program. This report is the result of the research phase of the project, completed in September 1992.

This report presents a comprehensive profile of Ohio Appalachia and those characteristics of the region related to the higher education participation rate of its residents. The research and data analysis was completed by the Institute for Local Government Administration and Rural Development (ILGARD) at Ohio University in conjunction with the **Appalachian Access and Success** project director, based at Shawnee State University.

FACTORS INFLUENCING PARTICIPATION IN HIGHER EDUCATION

The factors that influence an individual's decision to attend college are numerous, complex, and inter-related. This report divides the range of factors into four categories for purposes of analysis: individual influences, familial influences, institutional influences, and regional influences. Each one is briefly explained below. Figure 0.3 illustrates the inter-related influences on an individual and some of the variables used to analyze their impact.

Individual Influences

A high school student's academic ability, aspirations, and expectations are powerful influences on the decision to attend college. Although it is recognized that these factors are largely shaped by elements external to the individual--family environment, for example--it is the individual's attributes that are of concern here. Variables considered include students' academic achievement,[20] their career plans, and their educational aspirations.

Familial Influences

The high school student's family functions as a basic agency of socialization. The family, and parents in particular, can perform a variety of functions related to the college attendance decision as providers of economic resources, encouragers and promoters of education, and role models. Variables considered as familial influences include parental educational attainment, family income, and parental encouragement of education.

Institutional Influences

Institutional influences encompass factors related to the individual's school environment. Although researchers have examined the possible influence of

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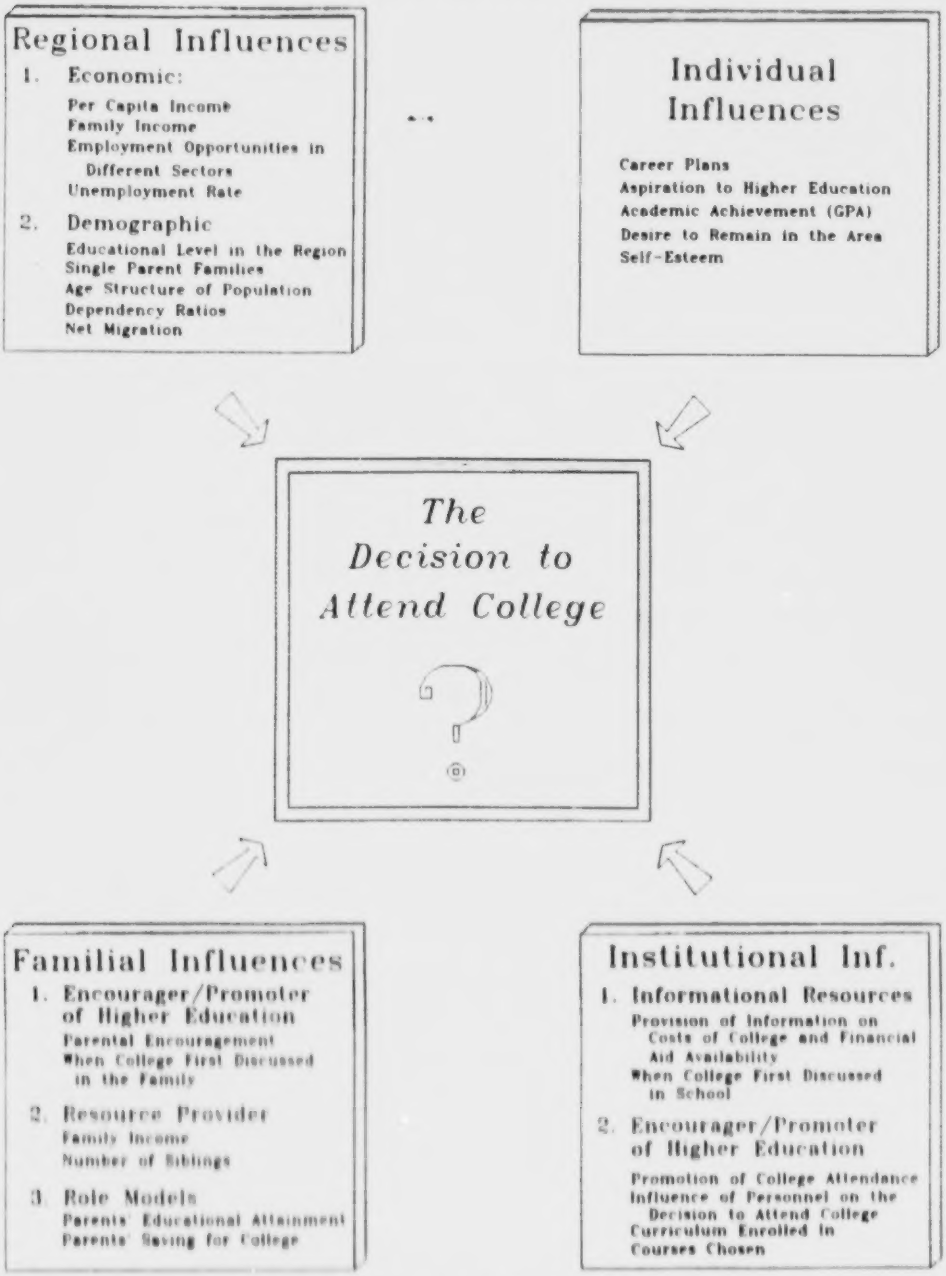
[20] The distinction between academic achievement and academic attainment should be clarified. The former refers to "what a person knows as measured by a standardized test" while the latter indicates the "last grade completed in school." Berlin and Sum, 11.

FIGURE 0.3
FACTORS INFLUENTIAL IN THE HIGH SCHOOL STUDENTS' DECISION TO ATTEND COLLEGE, SHOWING EXAMPLES OF THE VARIABLES ANALYZED


Regional Influences
1. Economic:
Per Capita Income
Family Income
Employment Opportunities in Different Sectors
Unemployment Rate
2. Demographic
Educational Level in the Region
Single Parent Families
Age Structure of Population
Dependency Ratios
Net Migration
Individual Influences
Career Plans
Aspiration to Higher Education
Academic Achievement (GPA)
Desire to Remain in the Area
Self-Esteem
The Decision to Attend College
?
Familial Influences
1. Encourager/Promoter of Higher Education
Parental Encouragement
When College First Discussed in the Family
2. Resource Provider
Family Income
Number of Siblings
3. Role Models
Parents' Educational Attainment
Parents' Saving for College
Institutional Inf.
1. Informational Resources
Provision of Information on Costs of College and Financial Aid Availability
When College First Discussed in School
2. Encourager/Promoter of Higher Education
Promotion of College Attendance
Influence of Personnel on the Decision to Attend College
Curriculum Enrolled in
Courses Chosen

variables such as student-teacher ratios, the evidence is inconclusive. Attention was therefore focused on the roles played by institutional actors--primarily teachers, but also counselors, administrators, and other school personnel--as providers of information related to the decision to go to college and as promoters of higher education.

Regional Influences

Regional influences include both economic and demographic factors specific to the Ohio Appalachia region. The structure and health of the regional economy have a profound impact on an individual's decision to pursue higher education. The labor market demands certain levels of education and skill. As the skill level required to compete for high-paying positions in the labor market increases, a higher level of education becomes more necessary for individuals seeking economic success. The level of per capita and family income in the region indicates the resources available to finance higher education.

Demographic factors are equally important in a student's pursuit of higher education. The size and age distribution of the regional population can determine the size of the pool of potential college applicants. The larger this pool of potential students, the higher the level of competition for college admittance and financial assistance. Demographic variables such as the educational level and socioeconomic status of the population set precedents for the region's youth to follow, thereby influencing the level of participation in higher education.

REPORT FRAMEWORK

Section I presents a profile of a sample of high school seniors in Ohio Appalachia surveyed in the fall of 1991. Focusing primarily on the seniors' survey responses, this section analyzes seniors' perceptions of their individual characteristics, familial influences, and institutional influences.

Section II examines familial influences, drawing on data collected through a survey of the high school seniors' parents. Parental perceptions are analyzed and compared to the perspectives of the seniors.

Section III is concerned with the institutional factors influencing the decision to attend college. Data were collected through a survey of high school personnel at the same schools where seniors were surveyed. The perceptions of institutional factors are compared to those of both students and parents.

Section IV focuses on nontraditional students in the Ohio Appalachia region. Nontraditional college students are individuals over the age of 25 who have returned to higher education having not--for a variety of reasons--enrolled in college immediately after high school graduation. Nontraditional students comprise a larger proportion of the student body than in the past. Their perspective sheds further light on the factors that govern access to higher education.

Section V of the research report examines the influence of regional characteristics on participation in higher education. This section is divided into two parts: section V.A examines the economic characteristics of the region; section V.B examines the demographic characteristics of the region. Economic and demographic trends over the last decade are examined for the 29-county region as a whole. Any counties that vary significantly from the regional averages are identified and discussed. More detailed county-level economic and demographic data are presented in tabular form in appendix III.

METHODOLOGY AND DATA SOURCES

Both primary and secondary data sources were used in the compilation of this report. In addition to data specific to the Ohio Appalachia region, a literature review provided comparisons with prior research findings on higher education participation.

SECONDARY DATA SOURCES

The analysis of the regional-level influences in section V--economic and demographic variables--relied on secondary data sources. These were used to create a profile of the economic and demographic characteristics of the Ohio Appalachia region.

County Business Pattern data were used to examine county and regional changes in employment across different sectors from 1980 to 1989, the most recent year of County Business Pattern data available at the time of the study. Additional economic data--per capita and family income and unemployment rate--were taken from the 1990 census. The poverty estimates used were taken from the Council for Economic Opportunity in Greater Cleveland's annual "Ohio Poverty Indicators" report.[21] Data from the 1990 Census were the major source of demographic information on the region.

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[21] CEOGC.

PRIMARY DATA COLLECTION

Four survey instruments were devised to examine those influences--individual, familial, and institutional--other than the economic and demographic characteristics of the region (see appendix IV). High school seniors were surveyed to provide information on individual influences. The parents of these students were surveyed to examine familial influences. High school personnel were surveyed to examine institutional influences. Finally, a sample of nontraditional students who had graduated from high schools in Ohio Appalachia was surveyed.

The survey instruments were developed with the use of focus groups consisting of high school teachers, counselors, and administrators. The focus group sessions offered preliminary insights into the types of barriers high school students face when considering whether to attend college. The variables to be studied were decided in these focus groups and specific questions were formulated. Although each survey is unique, similar questions were asked of each group to allow the comparison of their varying perceptions.

The first step in determining the sample for these surveys was to select objectively twelve counties that represented the region's diversity. The method for selecting the twelve counties is described below.

Within these twelve counties, 21 school districts were selected (see appendix IV). These were chosen to be representative of the different types of school districts in the region: city schools, local schools, exempted village schools, and vocational schools.

The Seniors Survey

The survey of high school seniors was distributed in 21 schools in the 12 counties during the fall and winter of 1991. It was distributed in classes required of all seniors to maximize the representativeness of the sample of students surveyed. Total official enrollment of seniors in the high schools surveyed for the first full week in October 1991 was 2,242. A total of 1,553 survey responses was returned, representing a response rate of 69.3 percent.

The sample is somewhat biased by the absence from it of those students who had already dropped out of school. Although the concern of this report is not with those who have dropped out before high school graduation, the existence of dropouts does represent a contraction of the potential pool of college students. The Ohio Department of Education reports an average dropout rate of 2.2 percent for Ohio and 1.7 percent for the Ohio Appalachia region in 1991.

The Parents Survey

The survey to investigate familial influences was distributed to the parents of high school seniors surveyed. The students were responsible for taking the surveys home to their parents and returning them completed to the school. Although this survey collection technique was cost effective and gave a good response rate, it probably resulted in a degree of sample bias. Students interested in higher education would have been more likely to ensure that their parents completed the survey; parents supportive of the idea of higher education would have been more likely to respond.[22]

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[22] Frances K. Stage and Don Hossler, "Differences in Family Influences on College Attendance Plans for Male and Female Ninth Graders," Research in Higher Education 30 (June 1989): 305, 312.

It is assumed that only 1,553 seniors received surveys to take home to their parents. The total number of parents responding, 422, therefore represents a response rate of 27.2 percent.

The Personnel Survey

The survey to measure institutional influences was distributed to school personnel--teachers, superintendents, principals, and counselors--in 10 of the 12 counties. Although the survey was distributed in all 12 counties, completed responses were not returned by three schools. This does not, however, alter the representativeness of the sample. A total of 265 high school personnel responded from 18 of the schools surveyed.

The Nontraditional Student Survey

In order to compare the different needs and experiences of traditional and nontraditional college students, a group of college students was surveyed. This sample consisted of individuals over the age of 25 presently enrolled at two- and four-year educational institutions in Ohio Appalachia (see appendix IV), who had graduated from a high school within the region but had not gone on to college until some years later. The final sample included 164 college students.

THE SELECTION OF COUNTIES TO BE SURVEYED

To ensure a representative sample for the primary data collection, an index was developed to rank the 29 counties in the Appalachian region. This ranking was used to select 12 counties to be surveyed.

A weighted index was constructed from five economic and demographic variables that have been demonstrated to be correlated with higher education access rates. Data for each variable were collected at the county level. The five variables used are:

- 1987 per capita income estimates (0.25 weight),
- 1987-88 higher education participation rate (0.25 weight),
- 1987-88 per capita school district taxation levels (0.25 weight),
- 1988 percentages employed in manufacturing (0.125 weight), and
- 1988 unemployment rate (0.125 weight).[23]

Each of these variables represents one of the regional influences on educational participation rates.

Per capita income estimates serve as a measure of the resources available within the community to finance higher education. The higher the level of per capita income, the more likely that a county's residents can afford to attend college.[24]

The present higher education participation rates of a county are correlated with participation rates in the future. Areas with high participation rates tend to reproduce this characteristic over time. Higher participation rates suggest a relative absence of barriers to participation.[25]

The per capita amount of taxation levied by school districts in each county indicates the value that the community places on education. The percentage of revenues allocated to education is a measure of the county's commitment to societal investment.[26]

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[23] For consistency, all data were recorded for the period 1987-88.

[24] Stafford, Lundstedt, and Lynn, 596.

[25] Ibid., 591.

The percentage of the population employed in manufacturing is directly related to the opportunity cost of attending college:

> If there are large numbers of fairly well-paying manufacturing jobs available . . . that do not require a college education, citizens will be drawn to the labor market.[27]

The higher the percentage of the population employed in manufacturing, the lower the expected rate of participation in higher education.

Finally, the unemployment rate has the opposite effect to that of the percentage of manufacturing employment. The higher the rate of unemployment, the less costly is the decision to attend college, as few or no alternatives exist in the labor market.[28]

These five variables were combined in an index at the weights indicated. The 29 Ohio Appalachia counties were then ranked from high to low on the index. The ranking was divided into three equal-sized groups of high, medium, and low positions on the index. At least three counties were selected from each group.

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[26] Ibid., 594.

[27] Ibid., 597.

[28] This could, however, have the opposite effect, where the higher unemployment rate is indicative of families being "less likely to have resources to send the youth to college." The former interpretation is, however, assumed here, as the index utilizes income as a proxy for ability to pay. Borus and Carpenter, 170.

The 12 counties finally selected were Belmont, Coshocton, Ross, and Jefferson, ranked at the high end of the index; Athens, Guernsey, Meigs, Muskingum, and Scioto, ranked in the middle of the index; and Lawrence, Pike, and Vinton, ranked at the lower end of the index.

ADDITIONAL METHODOLOGICAL ISSUES

The Participation Rate

The focus of **Access and Success** is the low rate of higher education access in the Ohio Appalachia region. Particular consideration should therefore be given to the reliability of the participation rate of intent statistics shown in table 0.1. At present, no systematic method exists in Ohio for tracking the behavior of individual students. The figures used are provided by the Ohio Department of Education and are collected annually in the fall from a survey of all Ohio school districts. They represent the best available indication of the percentage of high school graduates continuing on to higher education.

School officials are asked to list the proportion of the previous year's graduating class that has entered higher education. The method by which this assessment is made can vary in accuracy from an educated guess to attempts to trace the behavior of each individual student. The high variation between years within the same county is indicative of the poor reliability of the data. This figure, therefore, *does not* represent an actual rate of participation in higher education; it shows an estimate of the rate of *intent* to participate in higher education.

The same method of data collection is used throughout the state. Inconsistencies could therefore be expected to cancel each other out to some degree. The averages offer a useful indication of the variation between Appalachian counties, and between the Appalachian region and Ohio. Data for individual years are a less reliable indicator.

The Project Director, Mr. Dewey Lykins, believes the actual average participation to be approximately 12.0 percent less than is suggested by the figures from the Department of Education. Accounting for this results in an average participation rate of 31.4 percent for Ohio Appalachia. Interestingly, Governor Voinovich recently used a figure of 41.0 percent for the participation rate statewide.[29] Compared to the Department of Education estimates, this would agree with an overestimation of the participation rate by approximately 12.0 percent.

Reliability of Self-Reported Data.

The use of survey instruments means relying on self-reported data. It was impossible to verify all the information provided by survey respondents. Although the accuracy of self-reported data has been questioned--particularly where the data is "hard," such as family income or high school GPA--research has demonstrated a fairly high level of reliability for self-reports. Wilson and Portes compared students' self-reported grades with school records and found the accuracy (generally) to be good enough to use student estimates as a relatively reliable measure of academic performance.[30]

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[29] Governor George Voinovich, "Meeting Our Higher Education Challenge," Portsmouth (Ohio) Daily Times, guest editorial, 10 August 1992, A-4.

Although seniors' estimates of parental income may be unreliable, in the context of the present study this does not present a problem. An understanding of the students' *perceptions* of parental income is of equal value to hard data.

Anomalous Counties

In the economic and demographic data used to describe the characteristics of the Ohio Appalachia region, two counties were found to vary sufficiently from the regional averages to warrant an explanation. The reasons for, and treatment of, these anomalies are described below.

1. Clermont County

During the 1980s, development in Cincinnati spilled over to the south and west of the city. Clermont County benefitted greatly from this development in its northwest quadrant, significantly altering the demographic and economic character of this section of the county. The remainder of the county, however, retains characteristics similar to the rest of Ohio Appalachia.

If data for Clermont County are included in regional averages for a number of the economic and demographic variables used, its influence is strong enough to result in an unrepresentative portrayal of the region. For example, if

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[30] K. L. Wilson and A. Portes, "The Educational Attainment Process: Results From a National Sample," American Journal of Sociology 81 (September 1975): 343-63; see also Norman E. Freeberg, Analysis of the Revised Student Descriptive Questionnaire, Phase I: Accuracy of Student-Reported Information, College Board, Report no. 88-5 (New York: College Board Publications, 1988).

Clermont County is included in the averages for employment growth between 1980 and 1989, employment growth in Ohio Appalachia is 8.6 percent. This is twice the national rate of 3.8 percent. Without Clermont County, the percentage growth rate falls to 3.9 percent. A similar distortion is also apparent for other variables, including per capita and family incomes, and age-specific population change.

It was therefore decided to present regional averages *excluding* data for Clermont County where the influence of the county is strong enough to result in a misrepresentative portrayal of the region. Regional averages referred to in section V cover the 28-county region excluding Clermont, unless otherwise specified. Where it is useful to do so, data for Clermont are presented in comparison to the regional averages. Tables in appendix III provide averages both with and without Clermont County.

2. Holmes County

Holmes County contains a large concentration of Amish, approximately 30 to 40 percent of the total population.[31] The influence of the Amish and Conservative Mennonite populations is apparent in a number of the economic and demographic indicators analyzed. For example, 35.6 percent of Holmes County residents are educated no further than the eighth grade. This is double the percentage in any other county, and is accounted for by the Amish practice of halting education at the eighth grade (table II.1, appendix III). The 29-county average is 11.8 percent.

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[31] Joel Roscoe, Holmes County Department of Education, interview with author, August 1992.

Holmes County is, however, small enough not to exert a significant influence on the regional averages. It was therefore not removed from them as was Clermont County. The variables where Holmes County differs significantly from the regional average are referred to in the text.

The factors that influence high school seniors in their decision to participate in higher education are complex and varied. Social, psychological, and economic variables interact to shape aspirations and expectations, and create the material basis to attend college.

This section presents a profile of high school seniors in Ohio Appalachia drawn primarily from an analysis of the survey responses. Where applicable, comparisons are also made to the relevant college choice literature. This survey was administered to the high school class of 1992 in the fall and winter of their senior year. Each of the 12 counties was surveyed, covering 21 school districts (appendix IV). A total of 1,553 seniors responded.

INDIVIDUAL INFLUENCES

ASPIRATIONS AND EXPECTATIONS

Educational Aspirations

A prerequisite for college attendance is that the high school senior want a college education.[32] The high school seniors surveyed clearly aspire to enter higher education: 80.0 percent of respondents indicated that they *want* to go to college, 10.2 percent are unsure, and only 9.7 percent indicate that they definitely *do not want* to attend college.

This strong support of higher education is not unique to this region; it is supported by the results of similar studies. A recent survey found that 73 percent of twelfth graders in rural Ohio in the 1988-89 school year intended to pursue a college education.[33] Comparable national data show 64 percent of seniors graduating from nonmetropolitan high schools in 1980 planned to attend college following high school.[34]

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[32] Sol H. Pelavin and Michael Kane, Changing the Odds: Factors Increasing Access to College (New York: College Entrance Examination Board, 1990), 58.

Post-Graduation Plans

The seniors' aspirations can be compared to their plans for within one year of graduating from high school. Almost half of the sample, 45.3 percent, plan to be at a four-year college. Another 20.1 percent plan to be at a two-year college, 12.7 percent plan to be in employment, and 8.6 percent plan to be in the military. It is imperative that those who desire a college education be able to follow through with their plans as soon as possible after graduation from high school, as an opportunity window still exists at that time for higher education participation. Those who are able to enter college following high school graduation are more likely to attain a bachelor's degree during their lives than those who are in some way barred from doing so.[35]

Slight gender differences are apparent in seniors' plans immediately after high school. Females are seven percent more likely than males to plan to enter four-year colleges and almost eight percent more likely to plan to enter two-year colleges. As traditional family structures, with the male as sole breadwinner, become less common, more females are seeking higher education. Additionally, whereas high paying employment was often available to males with a lower level of education--for example, mining work--females wishing to enter higher-paying sectors are more likely to require higher education. Traditionally female occupations--education, nursing, or clerical work--now demand higher levels of education and skill proficiencies than in the past.

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[33] J. David McCracken and Jeff David T. Barcinas, Educational and Occupational Aspirations of Ohio Rural and Urban Twelfth-Grade Students, Paper presented as part of the symposium, "Educational and Career Plans of Rural Students" at the Midwest Educational Research Association Meeting, Chicago, IL (October 1989): 5, ERIC, ED 347352.

[34] Kelvin M. Pollard and William P. O'Hare, Beyond High School: The Experience of Rural and Urban Youth in the 1980s, staff working paper (Washington, DC: Population Reference Bureau, March 1990), i.

[35] Ken Kempner and Mary Kinnick, "Catching the Window of Opportunity," Journal of Higher Education 61 (September/October 1990): 535-47.

Already, the large discrepancy between the proportion of the population who see the need for, and aspire to, higher education and the number actually participating is apparent. The majority, 80.0 percent, of Ohio Appalachia seniors want to continue their education. Of the seniors surveyed, 65.4 percent plan to be enrolled at either a two- or four-year college immediately after graduation. The estimated participation rate for the region is around 30.0 percent. Significant barriers must therefore be intervening to prevent the majority of students from attaining their goals.

The region's participation rate can also be compared to that of the state as a whole. Whichever set of estimates is used, the participation rate for Ohio is more than ten percent above that for Ohio Appalachia.[36]

Migration Out of Ohio Appalachia

Of those planning to attend college, 30.3 percent of seniors thought they would attend a local college while 33.6 percent thought they would stay within Ohio but attend a college more than 50 miles from home. Almost a quarter, 23.2 percent, of seniors remained unsure where they would attend college. These figures can be compared to the national average of 87.0 percent of resident first-time freshmen who attend in-state colleges.[37]

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[36] See the discussion of participation rate data on page 22.

The desire to leave the Ohio Appalachia region was strong in the seniors surveyed. Only 13.3 percent of respondents *want* to live in the area. Although a third of respondents were unsure whether they wanted to or thought they would live in the area for most of their lives, 50.7 percent of respondents believe they *will not* and 57.9 percent *do not* want to. There was no significant correlation between educational achievement--measured by self-reported high school GPA--and the desire to leave the area. On average, 31 percent of seniors from nonmetropolitan high schools across the nation live in their hometown at least six years after graduation.[38]

Migrants from rural areas are, however, more likely than nonmigrants to continue their education after high school graduation.[39] Ohio Appalachia seniors who *want* to remain in the region are more likely to seek employment or attend a two-year institution immediately following high school. Seniors who believe they *will not* remain in the region are more likely to attend a four-year institution. Of the individuals who express a desire to remain located within the region, 27.0 percent plan to attend a two-year college, 20.1 percent plan to seek employment, and 34.3 percent plan to attend a four-year college. Of the individuals who wish to leave the region, 18.3 percent plan to attend a two-year college, 10.8 percent plan to seek employment, and 47.2 percent plan to attend a four-year college. If they follow through with their plans, a rural "brain-drain" will occur, with the more highly educated individuals migrating out of the region.

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[37] Kent Halstead, State Profiles: Financing Public Higher Education 1978 to 1989 10th ed. (Washington, DC: Research Associates of Washington, 1989), 27.

[38] Pollard and O'Hare, ii.

[39] Ibid.

Occupational Goals

Although 19.8 percent of respondents remained undecided about their career choice in their senior year, 37.0 percent had decided their career by grades 9-10 and 80.2 percent by grades 11-12. Training beyond high school was thought to be necessary by 87.0 percent of the sample.

By far the most common planned occupational category for seniors was "managerial and professional specialty," selected by 52.5 percent of respondents. Only 20.2 percent of employed fathers and 34.5 percent of employed mothers were working in this category.[40] Most employed fathers worked in "precision production, craft and repair," 33.5 percent, or were "operators, fabricators and laborers", 26.3 percent. The most common occupational category for mothers, 34.8 percent of respondents, was "technical, sales and administrative support." Of the total sample of mothers for whom employment was specified, 21.5 percent were classified as homemakers.

The high school seniors surveyed aspire to occupations that will require education beyond high school. This is confirmed by another study which found that "most rural students [in Ohio] planned on entering occupations that are not present in rural communities."[41] They also aspire to occupations of higher socioeconomic status than those of their parents. The Ohio Appalachia regional economy cannot at present meet the employment aspirations of the region's seniors. They will therefore be forced to settle for lower-status occupations or leave the region in search of better opportunities.

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[40] These percentages represent the proportion of the seniors' parents who were employed at the time of the survey and whose jobs, on the basis of the job title specified by the senior, could be classified in one of six major occupational categories as used by the Bureau of the Census.

[41] McCracken and Barcinas, 8.

Motivations

Those seniors who planned to attend college within a year of graduation from high school were asked to rank a number of motivations for doing so as either "very important," "somewhat important," or "not important." Getting a better job was the motivator most commonly ranked as very important, by 92.5 percent of the sample, followed by making more money, cited by 86.5 percent of the sample. These results are reflected in the 62.9 percent of seniors who believe they require a college education to gain financial security.

The seniors were not, however, solely motivated by the prospect of economic gain: 67.9 percent thought it very important that they learn things of interest at college and 40.4 percent were motivated to get a general education. That their parents wanted them to go to college was considered very important by only 21.9 percent of the sample. Not being able to find a job and wanting to get away from home were regarded as unimportant by the majority of seniors.

Peer Influence

Peer influence on the decision to attend college is very strong: friends were viewed as the second most influential group after parents. The majority of seniors, 84.4 percent, reported that at least one of their two best friends is planning to go to college.

ACADEMIC ACHIEVEMENT AND SELF-ESTEEM

Academic Achievement

Academic achievement has been shown to be a very important determinant of youth educational and occupational aspirations.[42] Academic achievement--as distinct from academic attainment--was measured with self-reported grade point averages (GPA).[43] There is "considerable evidence from past research that self-reports of past grades are highly predictive of future academic performance." [44] High school students with higher levels of academic achievement should, if other factors hold constant, be more likely to go directly from high school to college. Expected returns from college are positively correlated with academic achievement in high school.[45]

GPAs reported by Ohio Appalachia seniors were below national averages. Less than half of high school seniors in Ohio Appalachia, 46.1 percent, recorded GPAs of 3.0 or better. This is the equivalent of an A or B student. For the

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[42] William H. Sewell and Robert M. Hauser, "The Wisconsin Longitudinal Study of Social and Psychological Factors in Aspirations and Achievements," Research in Sociology of Education and Socialization vol. 1, ed. Alan C. Kerchoff (Greenwich: JAI Press, 1980), 60.

[43] Rosemarie McCartin and Katrina A. Meyer, "The Adolescent, Academic Achievement, and College Plans: the Role of Family Variables," Youth and Society 19 (June 1988): 385. For a further discussion of the reliability of self-reported grades, see Kenneth L. Wilson and Alejandro Portes, "The Educational Attainment Process: Results From a National Sample," American Journal of Sociology 81 (September 1975): 343-63.

[44] Thomas Ewin Smith, "Mother-Father Differences in Parental Influence on School Grades and Educational Goals," Sociological Enquiry 59 (February 1989): 91.

[45] Michael E. Borus and Susan A. Carpenter, "Factors Associated with College Attendance of High-School Seniors." Economics of Education Review 3 (1984): 169-76.

United States, 55.3 percent of seniors reported similar GPAs.[46] The larger proportion of the seniors surveyed, 49.0 percent, recorded themselves as C to B-students, with GPAs of 2.0 to 2.9. GPAs in the same range were reported by 39.2 percent of seniors nationally. A similar number of students in Ohio Appalachia, 4.8 percent, and the U.S. as a whole, 5.4 percent, reported GPAs below 2.0 (D+ or below).[47]

These figures demonstrate that Ohio Appalachia seniors are performing academically at a lower level than their counterparts nationally. However, this alone does not account for the lower participation rate of the region. Assuming that the sample was representative of all seniors in the region, it appears that factors other than academic achievement and ability remain in the way of a college education for Ohio Appalachia seniors.

High school GPA is, however, strongly correlated with seniors' plans within one year of graduation. Of the seniors with GPAs above 3.5--A/B+--81.6 percent plan to attend a four-year college, while only 2.8 percent plan to be employed. Conversely, of the seniors with GPAs of 1.0-1.4--D--9.1 percent plan to be at a four-year college and 40.9 percent plan to be employed. Plans to be employed or in the military are both negatively correlated with high school GPA. Plans to attend two-year colleges are strongest for those with GPAs between 1.5-2.9. Seniors with GPAs in this range are also the most likely to be uncertain of their plans.

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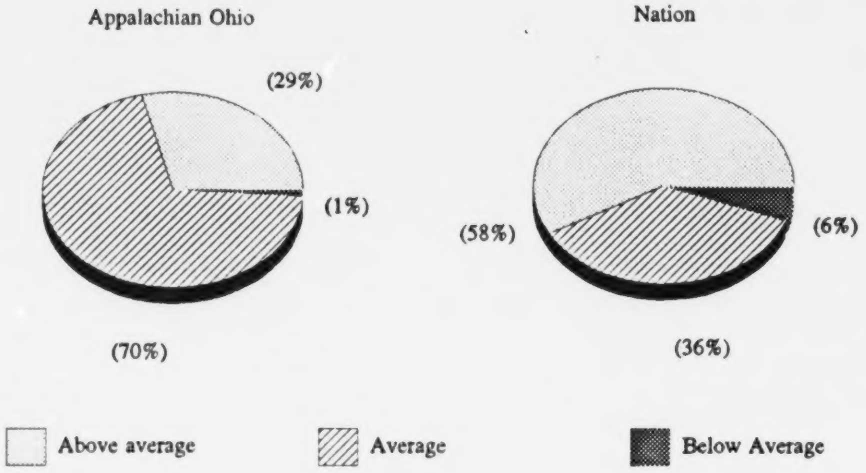
[46] Jerald G. Bachman, Lloyd D. Johnston, and Patrick M. O'Malley, Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors 1986 (Ann Arbor: Survey Research Center, Institute for Social Research, The University of Michigan, 1987): 20.

[47] Ibid.

FIGURE I.1 SELF-REPORTED INTELLIGENCE



Source: Appalachian Access and Success Senior Survey 1991;
Bachman, Johnston, and O'Malley, 19.

Self-Esteem

Healthy self-esteem is highly correlated with both aspirations for higher education and superior academic achievement.[48] In the present study, self-reported intelligence is used as a proxy for self-esteem. Seniors were asked to rank their intelligence as either average, above average, or below average (figure I.1). The proportion who rate themselves above average intelligence, 29.9 percent, is below the nationwide figure of 58.3 percent. The majority of seniors surveyed, 69.9 percent, consider themselves to be of average intelligence. A smaller proportion than for the nation--1.1 percent compared to 5.9 percent--consider themselves to be of below-average intelligence.[49]

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[48] Jill Ellsworth, et al, "Typology of Factors That Deter Participation with an Educational Institution," Journal of Adult Education 20 (Fall 1991): 15-27; Alejandro Portes and Kenneth L. Wilson, "Black-White Differences in Educational Attainment," American Sociological Review 41 (1976): 414-31.

Although this does not reflect very *low* self-esteem among Ohio Appalachia seniors, it also fails to demonstrate very *high* levels of self-esteem. Considering themselves to be of only average intelligence, Ohio Appalachia seniors may not believe that they have the requisite abilities for higher education.

Perhaps in contradiction to the above result, only 15.3 percent of the seniors *do not* consider themselves to be educationally prepared for higher education. However, 25.8 percent of seniors consider not being intelligent enough as a barrier to a college education, although this was generally given a low importance rating. Interestingly, the 29.9 percent figure for those who consider themselves to be of above average intelligence accords roughly with the average participation rate for the region.

Self-esteem is most influenced by experiences in the home and school environments. Encouragement by parents and educators could bring seniors' perceptions of their academic ability closer in line with their actual ability, thereby increasing the possibility that they will consider themselves sufficiently competent to continue on to higher education. In particular, educators must avoid any tendency to assume that certain students are not capable of higher education, thereby ceasing to encourage it as a viable option for the students in question.

This is reflected in the responses to the personnel survey (section III): only 43.3 percent of school personnel think that more than half of the students from their school are able to succeed in higher education. If they don't consider their students capable of success in higher education, it is doubtful that they will actively promote it as an option.

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[49] Bachman, Johnston, and O'Malley, 19.

FAMILIAL INFLUENCES

The home environment exerts a very strong influence on the formation of aspirations to higher education. Economically, the family can also influence the ability of a student to continue on to higher education. The family thus plays various roles: as encouragers and promoters of higher education, as economic resource providers, and as role models. Parents' perceptions of these interactions are examined in section II. Here, the seniors' perspective is analyzed.

ENCOURAGER/PROMOTER

In a review of the literature on college aspiration formation, Paulsen observed that of all the factors correlated with the desire to attend college, "parental encouragement has emerged consistently as the most influential."[50] This was confirmed in the present survey: parents were cited as an influence on the decision to go on to higher education by 86.1 percent of seniors (figure I.2). Of this number, 60.1 percent named parents as the group most influential on the decision.

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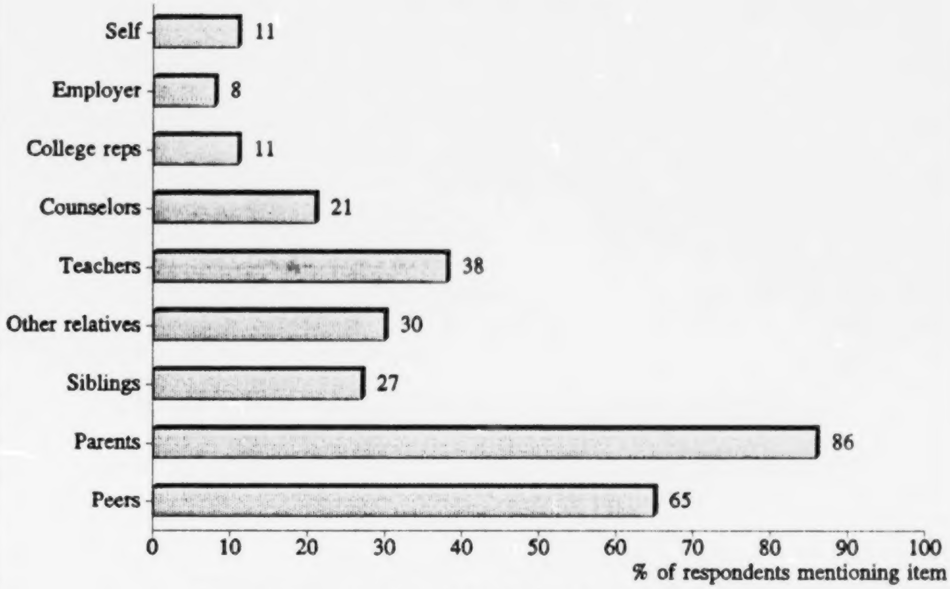
[50] Michael B. Paulsen, College Choice: Understanding Student Enrollment Behavior, ASHE-ERIC Higher Education Reports no. 6 (Washington, DC: George Washington University, School of Education and Human Development, 1990), 40.

FIGURE I.2 MOST INFLUENTIAL GROUPS IN HIGHER EDUCATION DECISION



Source: Appalachian Access and Success Senior Survey 1991

Parental Encouragement

From the seniors' perspective, there is a high level of parental support for higher education in the Ohio Appalachia region. By far the majority, 83.4 percent, say their parents want them to attend college. Only 3.8 percent have parents who *do not* want them to do so, and 12.9 percent are unsure of how their parents feel. Similarly, 89.3 percent of seniors say their parents encourage them to pursue higher education, while 7.4 percent have parents who do not offer encouragement. Although this apparently high level of support from parents is disputed by school personnel (section III, page 67), seniors' perceptions indicate that lack of parental encouragement is *not* a barrier to higher education in the region.

Discussion of Higher Education

The earlier the concept of higher education is discussed in the family, the greater the possibility that the individual will aspire to higher education.[51] Almost a third of seniors, 28.2 percent, remember discussing college with their parents before the eighth grade. An additional 37.9 percent of seniors had first discussed college with their parents between ninth and tenth grades. As the survey question did not make any reference to the content of these discussions, it is difficult to infer anything concrete from these results beyond the fact that most seniors consider they have discussed the option of college with their parents at some time.

RESOURCE PROVIDER

Generally, seniors' perceptions of the costs of attending two- and four-year colleges vary a great deal. Asked to estimate the cost of one year at a four-year college, 39.1 percent estimated between $5,000-$9,999. This accords well with cost estimates from the four-year colleges in the region, which vary between $6,000-$7,000 for one year, including room, board, and all fees.[52] Some seniors, 12.5 percent, estimated costs at below $5,000, but more importantly 48.4 percent estimated the cost of one year's attendance at above $10,000. Almost half of the seniors therefore perceive the cost of college attendance to be above the actual cost.

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[51] Stage and Hossler, 304.

[52] The cost of one year's attendance at the two- and four-year colleges that are members of the Consortium is based on cost estimates provided by the student financial assistance offices of the various institutions.

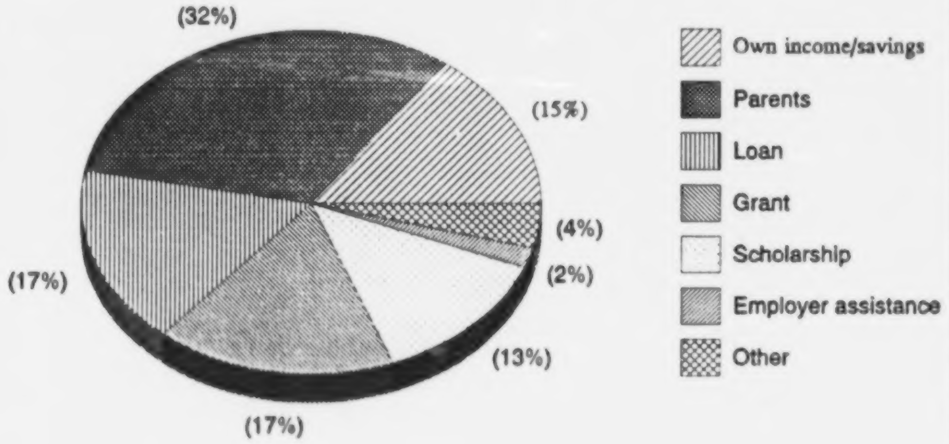
Seniors were also asked to estimate the cost of commuting to a two-year college. The actual tuition cost of two-year colleges in the region is approximately $2,000 for one year. A small proportion of seniors, 11.5 percent, estimated the cost of one year commuting to a two-year college to be less than $2,000; the largest proportion, 34.9 percent, gauged the cost to be between $2,000-$3,999. Over half of the respondents, 53.4 percent, estimated the cost to be over $4,000 per year, with 14.2 percent estimating over $10,000 per year.

These estimates indicate that high school seniors are not well-informed as to the actual costs. Being in the fall and winter of their senior year, one would expect those individuals who are planning to attend college to have begun the application process. This lack of precise information is therefore more surprising. In addition, the inaccurate estimates signify the existence of a perceptual barrier to higher educational access: the perceived costs are higher than the actual costs. Individuals may believe they cannot afford to attend college without ever finding out how much it would actually cost. Given their estimates of the costs, just over one third, 35.3 percent, of respondents believe they can afford college. Another third, 33.4 percent, say they cannot afford college and the remainder, 31.3 percent, are unsure.

Financing College

Asked to indicate how they planned to finance their college education, only 72.1 percent of respondents completed the question. Of those who did, 76.7 percent cited their parents as a financial resource. On average, parents were predicted to pay for 32.0 percent of expenses (figure I.3).

FIGURE I.3 SOURCES FOR FINANCING COLLEGE



Source: Appalachian Access and Success Senior Survey 1991

Nationwide in 1990, 79.0 percent of college freshmen received financial support from their parents.[53] This would seem to indicate that Ohio Appalachia seniors are less able to rely on their parents as financial resource providers than their counterparts nationwide. They are instead more heavily reliant on funding from alternative sources.

Almost half, 45.0 percent, of seniors indicated that some proportion of their college expenses would be covered by their own earnings, compared to 56.0 percent nationally.[54] In addition to the 32.0 percent of expenses paid for by parents, on average 34 percent of college expenses were predicted to be covered by grants or loans, 15 percent by personal savings, and 13 percent by scholarships. If public funding sources are to be relied on to this extent, high school students require a thorough understanding of the processes necessary to apply for financial aid.

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[53] Eric L. Dey, Alexander W. Astin, and William S. Korn, The American Freshman: Twenty-Five Year Trends (Los Angeles: Higher Education Research Institute, UCLA, 1991), 127.

[54] Ibid.

Family Income

Seniors' estimates, when compared to responses from the survey of parents, slightly overestimate family income levels. Only 69.2 percent of seniors gave estimates of their families' incomes. To allow comparisons with national averages, the estimated incomes were divided into quartiles which reflect the national income distribution for the families of high school seniors.[55]

Incomes in the lowest quartile--less than $21,959 per annum--were reported by 27.1 percent of respondents. Most families were in the two middle quartiles, with 32.8 percent earning $21,960-$38,868 and 30.2 percent earning $38,869-$63,793. A family income of over $63,794 was reported by only 9.9 percent of seniors. Especially when overestimates are allowed for, family incomes for the seniors surveyed are concentrated in the lower half of national earnings. This compromises parents' ability to act as resource providers for offspring wishing to enter higher education. Nationwide, students with low family incomes are less likely to gain a higher education.[56]

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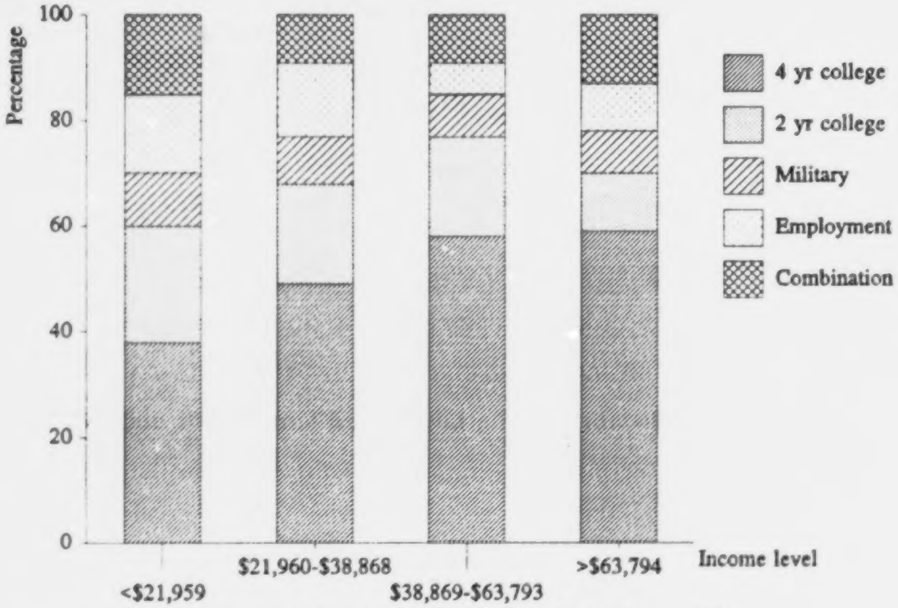
[55] Thomas G. Mortenson and Zhijun Wu, High School Graduation and College Participation of Young Adults by Family Income Backgrounds 1970 to 1989, ACT Student Financial Aid Research Report Series 90-3 (Iowa City: American College Testing, 1990): iv. The 1989 U.S. population of unmarried high school graduates was divided into equal sized quartiles according to their family incomes. The 1989 income categories used by Mortenson and Wu are adjusted to 1991 dollars in this report to reflect the 9.8 percent increase in the Consumer Price Index between 1989 and 1991.

[56] Mortenson and Wu, 18.

In addition to influencing the decision to continue on to higher education, family income may influence the type of education sought. Prior research has demonstrated that the lower the family income, the more likely the senior is to attend college on a part-time basis, if attending college at all.[57]

FIGURE I.4 POST-GRADUATION PLANS BY INCOME LEVEL



Source: Appalachian Access and Success Senior Survey 1991

There is a correlation between some of the seniors' possible plans and their estimated family income (figure I.4). The higher the estimated family income, the higher the likelihood that the senior plans to be at a four-year college within one year and does not plan to be either employed or in the military. No other clear correlations are discernible. Family income is not correlated with the high school curriculum the senior is following.

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[57] Ibid., 69.

Parental Savings

Exactly half, 50.0 percent, of respondents were unsure whether their parents had been able to save for their college education. Of those who gave a definite answer, 53.3 percent said their parents cannot afford to save. Only 23.4 percent of respondents said their parents had been able to save.

That half of the respondents are unaware of whether their parents had saved for their college expenses is indicative of a larger problem: the seniors do not have a very high level of knowledge about the resources available to them. This would help to account for the divergence between those who wish to continue on to higher education in the fall of their senior year and those who are actually able to do so. For many, the financial realities--when they become apparent--may constitute too large a barrier.

ROLE MODELS

The family can function as a role model in a variety of ways. The primary influence that parents have as role models is the level of education attained by both parents. Studies have demonstrated very high correlations between educational aspirations/attainment and parental education levels.[58] Parental occupations also have an influence on the aspirations of their children. In addition, the marital status of a student's parents has been shown to be correlated with levels of academic aspirations.[59]

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[58] A. Campbell and W. C. Eckerman, Public Concepts of the Cost and Utility of Higher Education (Ann Arbor, MI: University of Michigan, Institute for Social Research, 1964); Ron Tuttle, "A Path Analytic Model of the College Going Decision," (Boone, NC: Appalachian State University, 1981). ERIC, ED 224 434; Francis K. Stage and Don Hossler, "Differences in Family Influences on College Attendance Plans for Male and Female Ninth Graders," Research in Higher Education 30 (June 1989): 307; Thomas Ewin Smith, "Mother-Father Differences in Parental influence on School Grades and

Parental Educational Attainment

Borus and Carpenter found that a student's father's educational attainment was the strongest predictor of college attendance.[60] However, other research has found that the mother's educational level exerts a stronger influence.[61]

For the seniors surveyed, 12.5 percent of their fathers were educated at less than twelfth grade level, 47.9 percent had reached the twelfth grade, and 28.7 percent had some form of higher education. Mothers were generally educated to a slightly higher level: 11.0 percent reached less than twelfth grade, 50.4 percent had reached the twelfth grade, and 31.4 percent had some sort of higher education. If parental encouragement is in any way rooted in their personal experiences in higher education, then the region's seniors are at a disadvantage. Only about one-third of their parents have any personal experience of higher education from which to speak. Given that participation rates tend to be lower in regions that have lower average levels of education, this cycle must somehow be broken. This argument is discussed more fully in section II.

Educational Goals," Sociological Enquiry 59 (February 1989): 92.

[59] Stage and Hossler, 312; McCartin and Meyer, 387.

[60] Borus and Carpenter, 174.

[61] Howard R. Bowen, Investment in Learning. (San Francisco: Jossey-Bass, 1977); Berlin and Sum, 37.

Parental Marital Status

The majority of seniors surveyed, 68.2 percent, have parents who are married. Another 26.4 percent have parents who are either divorced, separated, or were never married. Given the established relationship between a traditional family structure--two married parents living together--and educational aspiration and achievement, the students who *do not* come from traditional family backgrounds may be somewhat disadvantaged.

The majority of seniors, 66.0 percent, do not have any siblings who have been to college and could therefore act as role models. One sibling who has been to college is reported by 24.7 percent of respondents; 9.3 percent have more than one sibling who has been to college. However, only 26.7 percent of seniors considered their siblings to be influential in the decision to participate in higher education.

INSTITUTIONAL INFLUENCES

High school personnel can influence the decision to continue on to higher education in a number of ways. First, they can function as resources for students attempting to make an informed decision. Second, they can encourage and promote the idea of higher education. Other institutional factors, such as the curriculum in which the student is enrolled and the courses taken, are also correlated with college attendance. High school personnel again exert an influence in guiding the choices of students in these important decisions. Here, only the seniors' perceptions of institutional influences are examined. The influence of school personnel is discussed more fully in section III.

INFORMATIONAL RESOURCES

When asked if their school does a good job of promoting higher education, 86.7 percent of seniors rate it as either good or fair. A small proportion, 9.6 percent, give their school a poor rating. A similarly high proportion state that their high school provides sufficient information on financial aid, while 59.5 percent feel that they receive enough information on careers that will require training after high school.

Almost all of the seniors, 80.1 percent, recall college being discussed at school before the tenth grade. An additional 8.8 percent became aware of college at school by the twelfth grade; the remaining seniors are unable to specify a particular time when they first became aware of college at high school.

Although college may be discussed at high school, students may still be lacking information crucial to making an informed choice about whether to attend: 33.4 percent of seniors cited lack of information about college educational programs as a barrier to participation. It is unclear whether the high schools are not being given the necessary information by colleges or whether teachers and other personnel are inadequately disseminating the information.

ENCOURAGERS/PROMOTERS

The majority of students, 66.5 percent, feel that their high school and area colleges promote college attendance. Only 6.6 percent feel that this is not the case, and 27.0 percent are unsure.

Influence of Personnel

Although one might expect teachers and other school personnel to be highly influential in the decision to attend college, this is not what the seniors report. Although 38.4 percent of respondents cited teachers as influential, they were not generally ranked as very influential. Similarly, 21.1 percent of seniors cited counselors as influential, but they too were not seen as a very important influence. The influence of school personnel may therefore be more indirect, including helping students choose courses and curricula which may be correlated with college attendance.

High School Curriculum

Borus and Carpenter found that "students in college preparatory curricula, as expected, were more likely to move straight from high school to college."[62] However, they also noted that it is difficult to determine how much this is related to self-selection by the students and how much is the result of the differences in training received in the differing curricula. Whichever is the case, school personnel have an important role to play in helping students to decide in which type of curriculum to enroll.

The majority of seniors surveyed, 57.1 percent, reported being in a college preparatory curriculum. This is well above the proportion of nonmetropolitan seniors nationwide, 33.0 percent, enrolled in a college preparatory curriculum in 1980.[63] Approximately one-quarter of students, 24.5 percent, report being enrolled in a general curriculum, compared to 43.0 percent nationwide.[64] Both these figures are, however, in agreement with a study of rural Ohio twelfth graders which found that 58.0 percent were enrolled in academic curricula and 22.9 percent in general curricula in the 1988-89 school year.[65]

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[62] Borus and Carpenter, 175.

[63] Pollard and O'Hare, 31.

Surprisingly, only 10.4 percent of students reported being in a vocational curriculum, well below the national nonmetropolitan average of 25.0 percent.[66] This is also below the proportion of seniors in rural Ohio, 19.1 percent, during the 1988-89 school year who were enrolled in vocational programs.[67] The Ohio Department of Education reports that in the 1990-1991 school year, 36.9 percent of high school students in grades 11 and 12 were enrolled in vocational programs.[68] Although one vocational school was included in the sample of high schools surveyed, this anomaly may be explained by sampling bias.

If these self-reports of high school curricula are reliable, it appears that this factor does not constitute a significant barrier to higher education participation. College preparatory curricula should be promoted for all students who have an interest in continuing on to higher education. Certainly, the majority of students enrolled in college preparatory courses plan to attend a four-year college straight after high school. Of those enrolled in general curricula, 17.6 percent plan to attend a four-year college and 23.5 percent plan to attend a two-year college.

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[64] Ibid.

[65] McCracken and Barcinas, 10.

[66] Pollard and O'Hare, 31.

[67] McCracken and Barcinas, 5.

[68] Ohio Department of Education, Closing Executive Vocational Education Data System Report (Columbus, OH: Ohio Department of Education, Division of Vocational Education, Planning and Administrative Services, 19 November 1991).

High School Courses

In addition to the influence of the high school curriculum selected, particular courses have been found to be correlated with college attendance. As with curricular choice, it is difficult to determine to what degree this is a function of self-selection and to what extent it reflects the learning that occurs within the courses themselves. Pelavin and Kane report that high school students

> enrolling in the following courses were more likely to attend college than others: algebra and geometry, at least one year of a laboratory science, and at least two years of foreign languages.[69]

No data were gathered for the present study on the individual courses taken by high school seniors, so comparisons are impossible. However, if taking these "gatekeeper" courses increases the likelihood of attending college, then a case should be made for encouraging students to do so.

BARRIERS AND INFLUENCES

The two groups considered most influential on the decision to attend college are parents, cited by 86.1 percent of respondents, and peers, cited by 65.0 percent of respondents. The third most influential group is teachers, mentioned by 38.4 percent of respondents, but given a lower importance ranking than either peers or parents.

By far the most commonly cited problem for seniors considering college is lack of finances, mentioned by 58.1 percent of respondents. Two other frequently specified barriers are also related to financial concerns: lack of financial aid information is cited by 38.1 percent of respondents and the desire for an immediate income by 31.9 percent.

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[69] Pelavin and Kane, Changing the Odds, 37-38.

The most pressing non-financial problem is lack of information on college education programs, 33.4 percent of the sample. Other frequently cited non-financial concerns are academically related: having poor grades in school, 26.9 percent of respondents and not feeling intelligent enough for college, 25.8 percent of respondents. Lack of parental support is cited as a problem by only a small percentage of respondents.

A high school student's parents are her or his strongest influence in the decision to continue on to higher education.[70] As the primary socializing unit, the family has a powerful role in shaping values and norms from an early stage. The family also provides an environment that can promote or hinder learning. Thus, parents influence the decision to gain a higher education through the various roles they play: promoters and encouragers of particular behaviors, providers of resources, and role models.[71]

This section examines the influence the family has on this important decision, primarily from the perspective of parents themselves. It analyzes the responses from the survey administered to the parents of the high school seniors surveyed, comparing the responses to data from the seniors' survey and other sources, where relevant. The three roles of the family--encourager and promoter, resource provider, and role model--are examined separately. Major barriers to seniors' participation in higher education are examined briefly.

The parent surveys were distributed to seniors at the same time the seniors completed their surveys. The seniors were to take the surveys home and then return them completed to school. From 1,553 seniors sampled, 422 parent surveys were returned, a response rate of 27.2 percent. It is likely that this parent sample is biased towards parents with a greater interest in their children's education.

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[70] Sandra L. Storey with Jesse Quails, Follow-Up Study of High School Graduates: Survey of the Chicago Public Schools Class of 1989 (Chicago: Chicago Panel on Public School Policy and Finance, June 1991), 10; Stage and Hossler, 308.

[71] Smith, 89-90.

Two other sources of bias exist in the survey responses. First, 78.1 percent of the respondents are female and only 21.9 percent are male. Second, 56.9 percent of the seniors whose parents responded are female and only 43.1 percent are male. Although these two factors are liable to have an effect on the responses, it is difficult to specify precisely the nature of the effect.

ENCOURAGERS AND PROMOTERS

PARENTAL ENCOURAGEMENT

Sewell and Hauser observe that:

> the failure of many able lower status children to have high aspiration levels is at least as likely to result from the student's perception of lack of encouragement by parents and teachers as it is to lack of financial resources.[72]

The seniors' responses conform with this finding: 86.1 percent of the sample specified their parents as one of the three groups most influential on the decision to participate in higher education. Of this group, 60.1 percent ranked parents as *the* most influential group.

Almost all the parents in the sample, 91.9 percent, wanted their seniors to pursue higher education. This is even more than the 80.0 percent of seniors who said they wanted to go on to college. This would be consistent with the possibility that the parent sample was biased towards those with a greater interest in the continuing education of their children.

Similarly, 96.4 percent of parents said they encouraged their seniors to pursue higher education; only 3.6 percent said that they did not encourage it.

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[72] Sewell and Hauser, 65.

This response is similar to the seniors' responses: 89.3 percent said their parents encouraged higher education, while 7.4 percent said their parents did not. If these survey results can be generalized across the region, it appears that lack of parental support is not a significant barrier to participation.

The survey did not, however, enquire further as to the type of encouragement offered by parents. Emotional support for the decision to attend college should be distinguished from support in the complex process of choosing a college, applying, and seeking financial assistance. The majority of parents are not college educated. The utility of the encouragement they can offer is therefore less than if they were able to speak from personal experience.

Discussion of Higher Education

The early introduction of the concept of higher education in a family setting can be influential on the decision to pursue higher education. Stage and Hossler report the findings of Ekstrom "that 61 percent of students had made the decision [to attend college] by 9th grade."[73] If the possibility of higher education is discussed within the family at an earlier stage, it is more likely that the child will aspire to gain a higher education.

Most seniors in the sample, 93.1 percent, have discussed college with their parents. Almost all parents, 96.6 percent of the sample, claim to have discussed college with their seniors. Another recent study found that 73 percent of rural Ohio parents discussed college with their twelfth graders during the 1988-89 school year.[74] The qualitative nature of the discussion was not, however, specified in the present study. It is, therefore, difficult to infer anything from this quantitative data alone.

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[73] Stage and Hossler, 304.

Caldwell and Trainer, in an ethnographic study of educational participation in rural Pennsylvania, observed a phenomenon which may be of relevance in the present context--class differences in the manner in which possibilities for higher education were discussed in the family.

> Working class parents shied at taking a proactive role in planning with their child for the future, almost as if planning with the child became somehow an unwarranted intrusion into the child's life . . . This sharply contrasts to the dominant middle class parents' ethic of insisting that children aspire to and plan for high educational and career objectives.[75]

Thus, it is not a sufficient indicator of parental encouragement that higher education was discussed in the family. The quality of the discussion is the more relevant question.

A discrepancy exists between when seniors and parents remember first discussing college in the family. Over half of the parents, 54.2 percent, claimed to have discussed college with their child before the ninth grade. Only 28.2 percent of seniors recall discussions this early in their lives, however. The source of this discrepancy is unclear. It could be a function of the sample bias; equally, it could be a matter of misinterpretation of the question in terms of the depth of discussion held.

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[74] McCracken and Barcinas, 6.

[75] Corinne A. Caldwell and James F. Trainer, An Ethnographic Study of Low Participation Rates in Higher Education in Southcentral Pennsylvania, Paper prepared for the American Education Research Association, San Francisco, 29 March 1989, 11, ERIC, ED 313181.

In comparison to the timing of a discussion of higher education in the family, 68.1 percent of seniors had decided on their occupations during high school. Only 12 percent had made a decision on a profession before the ninth grade. One in five seniors, 19.8 percent, remained undecided.

RESOURCE PROVIDERS

FAMILY INCOME

The higher the income and socioeconomic status of the senior's parents, the greater the likelihood that she or he will go to college. The effect of this predictor was found to be stronger than that of student ability on the degree of parental encouragement.[76]

Students with lower family incomes are less likely to participate in higher education.[77] High school seniors in Ohio Appalachia were asked to estimate their family incomes for 1990. It was impossible to validate the accuracy of the responses. Although there is concern over the reliability of self-reported data, particularly where the data are hard, as is the case for family income, the responses of seniors were generally very similar to those of parents. Seniors tended to slightly overestimate their parents' incomes.

A comparison can be made between the family incomes reported in Ohio Appalachia and the incomes of all families in the United States with high school seniors. The same nationwide income figures, split into quartiles, are used as described in section I, page 42.[78]

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[76] Sewell and Hauser, 67.

[77] Mortenson and Wu, vii.

Parents' reported family incomes concentrated in the lower two quartiles, with 28.0 percent earning less than $21,959 and 36.9 percent earning $21,960-$38,868. Only 12.2 percent were in the top quartile, earning above $63,794 per year. If the two sample groups are comparable, seniors overestimated their parents' earnings slightly, placing only 27.1 percent and 32.8 percent of their families in the lowest and second lowest quartiles respectively. The amount by which they overestimate is less important than the finding, demonstrated elsewhere in their responses, that seniors are lacking precise awareness of their parents' capacities as resource providers.

The poverty status of the parent sample is indicated by the proportion who receive welfare or other forms of public assistance. Only 13.6 percent of respondents professed to receive such benefits. Given the average poverty levels in the Appalachian region (section V.A, page 96), this would appear to be an underestimate. However, even if the sample is biased to higher income families within the region, data on receipt of public assistance such as food stamps consistently underestimate the numbers of poor.[79]

PARENTAL SAVINGS

Given the high proportion of seniors--76.7 percent of valid responses--expecting some help in financing college from their parents, it is interesting to examine the numbers of parents who have saved money for their offsprings' education. The majority of respondents, 62.6 percent, could not afford to save. Of those who had saved, 22.4 percent had been saving for less than five years and only 15 percent had been able to save for over five years.

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[78] Mortenson and Wu, iv.

[79] CEOGC, 103.

Of the factors influencing the choice of a college, financial aid availability was mentioned by 63.5 percent of parents. Of this group, 45.9 percent said it was the most important consideration. The majority of parents in Ohio Appalachia are clearly unable to finance their seniors' college education without recourse to other sources of funding.

FAMILY SIZE

One final influence on the parents' ability to act as resource providers is the number of children in the family. As the number of siblings in a family increases, there is generally "a significant negative effect on parental aid."[80] High school seniors had no siblings in 8.8 percent of families, according to parents' responses; 66.6 percent of seniors had 1-2 siblings; and 24.6 percent had 3 or more siblings. The predominance of fairly small families in the sample indicates that the negative effect of family size on the availability of financial resources is not a major problem.

For the seniors surveyed, there is a weak relationship between family income level and the desire to attend college: as family income rises, a larger proportion of respondents in the quartile express the desire to attend college. In the lowest income quartile, 78.3 percent of seniors express the desire to attend college. In the highest income quartile, 85.4 percent of seniors want to attend college. In the two middle income quartile groups, 80.4 percent of those in the second lowest quartile and 84.0 percent of those in the second highest quartile want to attend college.

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[80] J. R. Behrman, R. A. Pollak, and P. Taubman, "Family Resources, Family Size, and Access to Financing for Higher Education," Journal of Political Economy 97, no. 2 (1989): 398-419.

ROLE MODELS

It has already been observed that parents are the group most influential on the senior's decision to attend college. Parents and the family environment can provide a role model that influences the senior's aspirations. Parents' educational level and socioeconomic status are two of the most important factors to consider. The family structure and the number of siblings who have attended college can also be influential.

PARENTAL EDUCATIONAL ATTAINMENT

Prior research has demonstrated that both mother's and father's educational attainment is correlated with the desire to attend college.[81] Whichever parent's attainment has the stronger influence, it is clear that parental education is highly correlated with college-going aspirations.

The average level of educational attainment in Ohio Appalachia is lower than that in Ohio as a whole (table II.1). In Ohio, 23.9 percent of the population over 18 years of age did not graduate from high school; in Ohio Appalachia, including Clermont County, 31.7 percent of the population did not graduate from

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[81] Stage and Hossler, 311; Howard R. Bowen, Investment in Learning (San Francisco: Jossey-Bass, 1977), 97.

TABLE II.1
EDUCATIONAL ATTAINMENT IN OHIO APPALACHIA 1990
18 YEARS AND OVER

REGION	% LESS THAN 9TH GRADE	% 9-12 NO DIPLOMA	% HIGH SCHOOL GRADUATE*	% SOME COLLEGE NO DEGREE	% ASSOCIATE DEGREE	% BACHELOR DEGREE	% POST GRADUATE DEGREE
Ohio	7.0	16.9	36.0	19.3	5.1	10.5	5.1
Appalachia	11.8	19.9	42.7	13.3	4.1	5.2	2.7
Appalachia (exc. Clermont)	11.9	20.0	42.9	13.2	4.1	5.1	2.6
Adams	18.5	22.4	41.1	9.6	3.4	2.9	1.9
Athens	5.3	13.3	27.1	31.2	4.7	9.7	8.0
Belmont	10.5	16.6	45.2	13.9	5.2	5.5	2.9
Brown	12.8	21.6	41.4	13.5	4.1	3.9	2.7
Carroll	8.6	19.4	49.4	11.7	3.4	4.4	2.7
Clermont	8.5	18.3	37.2	17.6	5.1	9.2	3.9
Columbiana	8.8	19.1	44.9	14.6	4.6	5.3	2.6
Coshocton	9.9	18.8	48.2	11.7	3.3	5.4	2.2
Gallia	14.4	20.1	37.3	14.2	3.9	6.2	3.7
Guernsey	8.9	19.7	44.6	13.7	4.2	6.3	2.3
Harrison	10.1	19.9	47.0	12.5	3.7	4.6	1.7
Highland	11.9	21.7	42.3	12.5	3.9	5.2	2.2
Hocking	9.0	22.2	43.5	13.2	4.4	5.1	2.4
Holmes	35.6	19.2	28.9	7.8	2.4	4.2	1.5
Jackson	14.2	23.7	39.7	11.7	3.1	4.6	2.6
Jefferson	9.5	17.7	44.9	14.3	5.0	5.9	2.5
Lawrence	11.6	22.0	41.1	14.2	3.8	4.8	2.8
Meigs	13.7	21.8	42.5	10.7	4.6	4.5	2.2
Monroe	13.0	16.7	50.5	9.7	3.9	3.9	2.3
Morgan	9.7	18.2	50.6	10.9	3.8	4.6	2.1
Muskingum	8.4	19.4	42.7	15.5	4.9	6.0	3.1
Noble	8.4	21.5	53.5	8.7	3.3	3.8	1.4
Perry	9.3	21.5	49.1	10.4	4.3	3.4	1.9
Pike	16.1	22.3	38.0	11.7	4.4	4.4	2.9
Ross	9.5	22.4	39.9	14.7	4.7	5.8	2.6
Scioto	14.6	20.3	36.3	15.9	5.1	4.9	2.8
Tuscarawas	9.3	18.5	46.5	13.1	4.2	5.6	2.7
Vinton	14.6	24.7	42.8	9.7	3.1	2.9	1.5
Washington	7.1	14.7	43.2	17.3	5.8	8.4	3.8

* High School Graduates are persons who received either a high school diploma or equivalent (GED) and **did not** attend college.

Source: Ohio Data Users Center, 1990 STF3 Subject Report Series: June 1992.

high school. Similarly, 40 percent of Ohio residents received some sort of postsecondary education, compared to only 25.3 percent of Ohio Appalachia residents.

Where only a quarter of the region's population has some experience of postsecondary education, parental education is a strong barrier to higher education participation. With no experience from which to speak, parents are limited in the help they can offer their children. Although it is not reflected in our sample, it is possible that some parents

> feel enough satisfaction in their own lives that they feel a very limited need to subscribe to a better and brighter future for their children.[82]

The parents would thus be likely to take a less proactive role in encouraging higher education for their offspring.

The variation in educational attainment between the region's counties is fairly small, with the obvious exceptions of Athens County, influenced by the presence of Ohio University, and Holmes County, influenced by the large Amish population. What variation exists, however, is obviously correlated with per capita income levels: the poorer counties--for example, Vinton, Meigs, and Adams--have on average larger numbers of individuals who did not graduate from high school.

The parent survey respondents were better educated than the regional average. Only 9.8 percent of respondents, remembering that 78.1 percent of the sample are female, had been educated at less than ninth grade level. Over half, 52.7 percent, were high school graduates with no advanced education; 37.4 percent had some sort of postsecondary education. Spouses were recorded as having a very similar level of educational attainment.

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[82] Caldwell and Trainer, 11.

Although the parent sample has a higher level of educational attainment than the regional population, parental education still constitutes a barrier to educational participation. Even for this sample, just over a third of respondents have experience in postsecondary education. This limits the extent to which they can act as positive role models for the benefits of higher education.

SIBLING EDUCATIONAL ATTAINMENT

Other siblings who have attended or are attending college, could counteract the negative influence of lower parental educational levels. The sibling provides a role model in place of the parents. Less than half of the parent sample, 38.6 percent, had other children who had attended college. The majority, 61.4 percent, had no children with college experience.

PARENTAL MARITAL STATUS

Family structure has been demonstrated to be correlated with educational aspirations. Compared to the regional average of 61.1 percent married couples, 82.7 percent of the parent sample were married and only 14.4 percent separated or divorced. Again, this is probably a function of sample bias and may explain, in part, the predominantly positive attitudes to higher education expressed by the parents.

BARRIERS

Perhaps not surprisingly, parents do not identify lack of parental encouragement as a barrier to their seniors' participation in higher education. By far the most frequently cited barrier is lack of finances, mentioned by 64.7 percent of respondents. It was the number one barrier for 41.2 percent of respondents.

The second most frequently specified barrier was lack of information about financial aid, referred to by 36.5 percent of respondents. Three more barriers are cited by a notable number of respondents: poor grades in school, 19.43 percent, dislike of school, 18.5 percent, and college being too far away, 17.8 percent. The pattern is similar to the responses of the seniors themselves, although seniors were also likely to cite not being intelligent enough.

The debate continues whether high school characteristics such as student/teacher ratios and school size have a positive or negative affect on a student's decision to pursue higher education.[84] More conclusive evidence, however, documents the influence that educators and school personnel have on students' decisions to attend college.[85]

This section analyzes the influence of high school personnel, including school teachers, counselors, superintendents, and principals. Data are drawn primarily from the survey of school personnel, defined to include the above groups, and comparisons are made with data from the other survey instruments where applicable.

The survey was distributed to school personnel in the same 12 counties in which seniors were surveyed. Five schools did not return surveys, so the final sample includes 16 high schools in 10 counties, from which 265 surveys were returned. The sample remains representative of the diversity in the Ohio Appalachia region. The majority of the final sample, 85.9 percent, were teachers, 6.5 percent were counselors, 3.4 percent were principals, 1.5 percent were superintendents, and the remainder either did not specify their position or were other miscellaneous school personnel.

The influence of school personnel will be analyzed from three perspectives: the level of influence that school personnel, particularly teachers, have over students; school personnel as informational resources; and personnel as encouragers and promoters of higher education. These are each evaluated in turn.

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[84] Borus and Carpenter, 171.

[85] Sewell and Hauser, 65.

THE INFLUENCE OF SCHOOL PERSONNEL

There is much evidence that high school personnel influence college participation rates in high schools.[86] The majority of personnel, 87.8 percent, thought their attitude influenced students' decision to continue to college; 96.9 percent stated that they attempted to raise interest in higher education.

Although they acknowledge their influence on the decision-making process, personnel do not believe themselves to be the most important influence on students' decisions. A large proportion, 72.5 percent, of personnel cited teachers as influential. However, only 9.4 percent believed teachers to be the primary influence. Seniors view teachers as less of an important influence: only 38.4 percent cited teachers within their top three influences and just 4.7 percent referred to teachers as their primary influence. Other high school personnel were viewed as even less influential by seniors: 25.7 percent of personnel cited counselors as one of the three greatest influences.

Parents were named by 95.1 percent of personnel as one of the groups influential on the decision to go to college. Of those mentioning parents, 68.3 percent rated them the primary influence. This coincides with seniors' responses. However, school personnel are in disagreement with both seniors and parents about the nature of parental influence.

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[86] See, for example, José A. Carrasco, Assessing the Knowledge that Educators Have About College-Related Information for Students in Four Year Public High Schools, San José State University, 5 August 1988, 28, ERIC, ED 307821.

Compared to 96.4 percent of parents who said they encouraged higher education for their children, 39.2 percent of personnel think that less than a quarter of parents encourage higher education. Another 38.2 percent think that between a quarter and half of all parents encourage higher education. Only 22.6 percent of personnel think that more than half of all parents encourage higher education. This discrepancy may exemplify the lack of specificity in the responses about the character and quality of the parental "encouragement." However this is explained, it indicates a higher level of responsibility for actors outside the family to promote educational access.

Specific details about the level and type of support provided by parents were not sought in the survey. The discrepancy between parents' and personnel's perceptions, however, may signify a qualitative difference in the encouragement being provided. Emotional support for a decision to go to college should be distinguished from support in the complex process of choosing a college, completing the application process, and applying for financial assistance. The response to this question from personnel may be an allusion to the lack of support in the *process* of college application, rather than an outright rejection by parents of the utility of a college education. As the majority of parents do not have a college education, they are limited in the experience that they can bring to help their children.

School personnel are almost certainly college educated. The college environment, however, has changed significantly in the recent past, thus rendering their experience less relevant. With increasing national rates of participation in higher education, a college education is both open to and required for a larger proportion of the population than before. If high school personnel are to offer pertinent advice on the college experience, they may need to update their own perceptions of what a college education entails and for whom it would be suitable.

INFORMATIONAL RESOURCES

In order to aid seniors in their decision whether or not to attend college, school personnel must themselves be informed about options in both the educational and labor markets. This demands that colleges make information available to high schools for dissemination to students. Carrasco, in a detailed study of California public high schools, examined what educators knew about the academic entrance requirements for public colleges. He found that educators generally lacked the information necessary to help students make informed decisions.[87]

INFORMATION FROM AREA COLLEGES

Fewer than half of the personnel respondents, 47.1 percent, thought that area colleges provided sufficient information on financial aid and college costs. Although only 11.1 percent did not believe this to be the case, the remaining 41.8 percent were unsure. Similarly, while 39.8 percent of respondents thought that area colleges provided sufficient information on entrance requirements and expectations, 37.5 percent were unsure and 22.6 percent believed that insufficient information was being provided.

In light of the comparatively limited influence college representatives seem to have on the decision to enter higher education, it seems colleges should make a greater effort to deliver timely and pertinent information to high schools.

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[87] Carrasco, 27.

Teachers in particular, because they have more contact with students and are seen as an influential party, are a potentially invaluable resource for college recruitment strategies.

Only 43.3 percent of high school personnel think that colleges do a good job in promoting higher education, while 9.9 percent think the job is done poorly. Likewise, only a small percentage of personnel believe that seniors are influenced by college recruitment efforts. Colleges must rethink their recruitment techniques and allocate resources where they will be more effective. Opportunities exist for improved links between colleges and high school educators in their shared goal of increasing higher education access.

INFORMATION FROM HIGH SCHOOL PERSONNEL

In contrast to their assessment of information from colleges, high school personnel are less critical of the adequacy of the information they provide. The majority believe that high schools provide sufficient information on college costs and financial aid, 72.6 percent of respondents, and on careers requiring training, 57.3 percent of respondents. Although the proportion of positive responses to these two questions generally coincide with those of seniors and parents, these latter two groups, in comparison to personnel, are more likely to regard the information provided as insufficient.

Personnel, on average, report that they spend approximately ten percent of their time informing students about higher education. Given all the other demands on their time, this seems like an overly generous estimation, perhaps indicative of the importance with which personnel regard informing students about post-graduation options.

ENCOURAGERS AND PROMOTERS

Only 3.8 percent of personnel believe that high schools are doing a poor job of promoting higher education; 65.9 percent believe they are doing a good job and 28.8 percent rate their performance as fair. Parents and seniors are somewhat less enthusiastic: 10.6 percent and 9.6 percent of parents and seniors respectively rate their high school's performance as poor; 40.0 percent and 43.9 percent respectively rate it as fair. If seniors feel their needs are not being met--and this is confirmed in the responses of the nontraditional students--then there is a need for communication between the groups to attempt to fill the gap.

Although 96.9 percent of personnel say they attempt to raise interest in higher education, it was not asked whether they targeted any particular student groups for this. "Teachers apparently are perceived [by students] to base their encouragement on ability and grades."[88] If teachers are directing their encouragement towards only certain types of students, then other students may not be receiving the information or encouragement they require to improve their chances of entering higher education. Teachers' perceptions of a student's level of ability can condition the amount and type of interaction regarding higher education.

If personnel do not regard their students as capable of higher education, they may not make an effort to promote it as an alternative. The mean percentage of students personnel thought to be educationally prepared for college was 45.0 percent. A third of respondents considered one-quarter or less of their students to be prepared; another third of respondents estimated that between a quarter and half of all students are prepared. These figures are within the range of the estimated participation rate for the region.

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[88] Sewell and Hauser, 73.

A little more than half, 52.5 percent, of respondents believe, however, over half of all students *should* go on to higher education. It is unclear exactly how this question was interpreted, so it is difficult to explain the significance of the responses.

When asked to estimate the percentage of students from their high school who would be able to succeed in higher education, the percentages were significantly higher than those for the number of students educationally prepared for higher education. Over half of the respondents thought that 51 to 100 percent of all students should go on to higher education. This at least demonstrates that high school personnel are aware of the value of higher education and could therefore be useful in attempts to increase participation rates.

One method by which personnel--teachers in particular--can influence a student's decision to continue on to college is in the student's selection of an academic track and courses in high school. Past research has demonstrated the correlation of certain "gatekeeper" courses and the type of high school curriculum with improved access to higher education.[89] Having taken algebra and geometry, laboratory sciences, and foreign languages in high school was found to be strongly correlated with college attendance.[90] If teachers can direct students into these classes, college attendance rates may increase.

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[89] Sol H. Pelavin and Michael Kane, Minority Participation in Higher Education (Denver: Education Commission of the States, 1988); Pelavin and Kane (1990), 72.

[90] Pelavin and Kane, Changing the Odds, 38.

BARRIERS

Lack of finances is seen as the major barrier, referred to by 62.6 percent of personnel. This is followed by lack of parental support, 54.7 percent of respondents, wanting an immediate income, 28.3 percent, and the student feeling that she or he won't fit in, 27.2 percent of respondents. The large discrepancy between parents' and personnel's perceptions of parental support reflects different perceptions of the type and quality of encouragement required.

SECTION IV
NONTRADITIONAL STUDENTS

Nontraditional students are defined as those students 25 years of age or above, in comparison to the traditional-age student pool, which consists of individuals 18-24 years of age. Demographic projections showed that after the rapid increases in educational participation from 1955 until 1970 and the slower growth during the 1970s, "the prime college population will decline greatly as the baby boom children are replaced by those smaller cohorts born after 1965."[91] This decline will continue until the mid-1990s. Awareness of this changing environment has spurred a burgeoning body of literature related to the college choice decisions of nontraditional students.

In the context of a rapidly changing economic environment, where skills may have become obsolete, education has become a lifelong process rather than a one-time investment. In order to remain competitive in the labor market, individuals may enter or re-enter higher education at times other than the traditional opportunity window immediately after high school graduation. Also, irrespective of an individual's educational attainment, where the labor market is tight the opportunity cost of entering higher education is lower. Attempts to increase the educational attainment of Ohio Appalachia's population should not neglect students outside the traditional age group.

This section of the report commences with a brief examination of the demographic changes behind the decreased size of the traditional-age student population. This examination is followed by a review of the literature on nontraditional student participation, with an emphasis on the different requirements of the group. Finally, the responses to the survey of nontraditional students in Ohio Appalachia are examined, in particular to determine the barriers that inhibited their earlier educational participation and the factors that led to their return to education.

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[91] Harriet Fishlow, A Demographic Overview of Postsecondary Education (Washington, DC: National Commission on Student Financial Assistance, 1982), i, ERIC, ED 228935.

DEMOGRAPHIC CHANGE

Bishop and Van Dyk observe that "the heightened interest in adult students is . . . a pragmatic response to the hope that in the 1980s nontraditional students will fill the classrooms that are emptied by the contraction of the 18 to 24 age cohort."[92] Those classrooms will need not only to have been filled during the 1980s, but through into the present decade as "the low point years of the 18 to 24 year old population will be in the early to middle 1990s."[93]

Even by the year 2000, however, it is predicted that the body of traditional-age students will not have returned to its twentieth century peak attained in 1981.[94] The composition of this potential student body will also have changed significantly, with larger proportions of black and hispanic members, groups which have not traditionally enrolled in higher education at very high rates. It appears that colleges will need to cater to a different type of student body however they choose to fill the demographically-induced enrollment declines.

The maintenance of peak enrollment rates requires that demographic losses are offset by increases in participation rates. Nontraditional student groups are a potential source of increased enrollment. However, there are limits to the extent to which nontraditional students can fill the enrollment gap created as a result of demographic shifts. In the last decade of this century, the 25 to 34 year old age cohort, which typically comprised the majority of nontraditional students, will contract in size by 16 percent. In addition,

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[92] John Bishop and Jane Van Dyk, "Can Adults be Hooked on College? Some Determinants of Adult College Attendance," Journal of Higher Education XLVIII (Jan./Feb. 1977): 40.

[93] Fishlow, ii.

[94] Ibid., 6.

> substantial increases in participation rates for this group do not appear probable, although as with younger students, improved economic circumstances with a consequent increase in the rate of return to higher education or further training . . . could have some effect.[95]

Women have typically comprised a large proportion of the nontraditional student body. The proportion of women is, however, likely to decline in the future: "the market for 'returning' women will shrink as fewer will have left in the first place."[96]

Much of the research on nontraditional students has focused on the possibility of increased enrollments compensating for declining numbers of traditional-age students. The emphasis of this section, however, is twofold: first, individuals who did not go directly to college from high school can offer insight into the factors that led to this decision; second, increased educational access for nontraditional students could play an important role in the revitalization of the Ohio Appalachia region.

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[95] Ibid., 7.

[96] Ibid., 8.

RESEARCH ON NONTRADITIONAL STUDENTS

The research on the college choice behavior of traditional-age students "does not appear particularly relevant to the choices made by older students."[97] Both their needs and the college choice decision processes may contrast with those of traditional-age students. Nontraditional students, in addition, are far from being a homogeneous group. Any desire to increase nontraditional access to higher education must therefore be informed by an understanding of those attributes unique to the various nontraditional student bodies.[98]

Paulsen, in a review of the relevant literature, lists characteristics of nontraditional students that are correlated with increased probability of attending college. These are as follows:

- the student is white,
- the student's occupational status is higher,
- the student's previous educational attainment is higher,
- the student's own income is greater,
- the student is at a younger age,
- the student is not married (significant for female students only),
- the student has fewer children under 18 years,
- the student is working full-time,
- the student is a veteran,
- the student has college-level educational aspirations,
- the student resides a short distance from college,
- the college's tuition is lower,
- the student is receiving financial assistance as either financial aid, veteran's benefits, or welfare,
- job market opportunities for noncollege graduates are poor,

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[97] Trudy H. Bers and Kerry Smith, "College Choice and the Nontraditional Student," Community College Review 15 (1987): 39-40.

[98] Ibid., 132.

- job-market opportunities for college graduates are good, and
- the student is not in the armed services.[99]

These findings implicitly demonstrate the barriers to higher education for nontraditional students. Individuals less likely to enroll as nontraditional students, therefore, will tend to be nonwhite, of lower occupational status and prior educational attainment, older, of lower income, have more children under ten years of age, and so on.

In terms of policy variables that can be easily manipulated, it has been found that "adult students are more responsive to tuition levels than are recent high school students."[100] Each dollar in tuition cuts will, thus, increase enrollment of nontraditional students at a faster rate than that of traditional-age students. Whether enrollment increases as a result of tuition cuts would be sufficient to make up for losses in average tuition revenue was not addressed by the study.

The nontraditional students examined by Bers and Smith "did not report engaging in any of the sequential search processes and decision activities suggested by the college choice literature."[101] Although this finding may partially be explained by the study's focus on community colleges, it nevertheless has important implications for the recruitment practices of educational institutions that are targeting nontraditional students. College choice decision models developed with traditional-age students in mind may not be relevant to nontraditional students.

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[99] Paulsen, 31-33.

[100] Bishop and Van Dyk, 53-54.

[101] Bers and Smith, 41.

Nontraditional students are a heterogeneous body, including many different age groups with diverse motivations for attending college. In relation to their motivations for entering higher education, Rogers, Gilleland, and Dixon propose a continuum of motivations ranging from the purely utilitarian--education as a direct investment in one's career, for example--to the non-utilitarian.[102] Adults exhibiting dissimilar motivations to return to education will respond differently to the colleges' various educational offerings, as well as the modes used to communicate the offerings. Changes in course offerings, timing of classes, and the types of promotional materials used may all influence the attractiveness of an educational institution to nontraditional students with needs different from those of the traditional-age student body.[103]

Kempner and Kinnick examine the proposition that there exists an opportunity window for participation in higher education.[104] Although there is evidence that we exist in an increasingly "age-irrelevant society," higher education remains largely locked into the constraints of age-appropriate behavior:

> the data here indicate strongly that the odds of attaining at least a bachelor's degree favor the person who aspires to this level of educational attainment in high school and then enters postsecondary education on time.[105]

An opportunity window was found to exist immediately after high school graduation; "once missed, other mediating characteristics are needed to overcome this failed opportunity."[106] Even though there have been rises in nontraditional student participation, it remains important to open up new opportunity windows to increase the equitability of educational access for those who miss the opening immediately after high school.

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[102] Ibid., 199.

[103] Mary E. Wolfgang and William D. Dowling, "Differences in Motivation of Adult and Younger Undergraduates," Journal of Higher Education 52 (1981): 645-46.

[104] Kempner and Kinnick, 535-647.

[105] Ibid., 544.

Corman examined the increased enrollment of older students from a human capital model perspective, whereby "schooling is viewed as an investment undertaken if the present value of the stream of benefits exceeds the costs."[107] In the conventional specifications of this model, this increased enrollment appears to reflect either irrational investment behavior or education as a consumption rather than an investment good.[108] She concluded, however, that nontraditional students were indeed acting in an economically rational manner, mitigated by factors such as imperfect capital markets and the lack of depreciation of the value of education for certain groups.[109]

Corman's conclusions are perhaps of greatest relevance to the present study. The barriers she observed to immediate post-high school higher education are those that the present study aims to identify and suggest strategies to overcome.

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[106] Ibid., 546.

[107] Hope Corman, "Postsecondary Education Enrollment Responses by Recent High School Graduates and Older Adults," Journal of Human Resources 18 (Spring 1983): 250.

[108] Ibid., 248.

[109] Corman, 248-49.

SURVEY ANALYSIS

The final sample of nontraditional students consists of 164 individuals age 25 or above who attended high school in the Ohio Appalachia region and did not go on to college immediately after high school, but have now entered higher education. The sample is drawn from a number of higher educational institutions in the region that are members of the consortium (see appendix IV).

The final sample included proportionally more women than men. Of the 163 who specified their gender, 68.1 percent were female. This may have biased the results to some degree; a number of studies have reported significant gender differences in nontraditional students' participation.[110]

INDIVIDUALS' ATTRIBUTES AND MOTIVATIONS

Marital Status

The majority of the respondents, 57.9 percent, are married, while 10.4 percent never married and 30.5 percent are divorced or separated. This contradicts the findings reported in Paulsen's literature review that female nontraditional students are more likely not to be married.[111]

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[110] For example, one study found that an open-door college policy had a statistically significant effect women but not on men and that income increased enrollment to different degrees according to gender. Bishop and Van Dyk, 47-48.

[111] Paulsen, 31-33.

Migration Out of Ohio Appalachia

A much higher proportion of this sample than of the seniors wanted to, or thought they would, live in the Ohio Appalachia region for most of their lives. Only 13.3 percent of seniors expressed a desire to remain in the area, while 50.6 percent of older students expressed a similar aspiration. This is compounded by the more emphatic rejection of the possibility by the seniors. Older students' stronger desire to live in the area indicates that education is not generally being sought by them as an escape route from their present location. Thus, the skills they acquire are likely to remain within the region; whether they will find an outlet for their new skills is a separate question.

Full/Part-Time Attendance

Nontraditional students tend to attend college part time at proportionally higher rates than traditional-age students.[112] It is therefore interesting to note that a larger portion of nontraditional students than seniors was attending fulltime, 78.0 percent as compared to 67.1 percent. The sample may be too small to be fully representative.

Preparedness for Higher Education

In terms of their preparedness for higher education, 44.5 percent of nontraditional students felt themselves equipped, compared to 57.7 percent of seniors. However, 41.5 percent of the sample *did not* feel prepared, compared to only 15.3 percent of seniors. This could indicate two things: having been out of school for a period of time, the adults may feel less familiar with the educational environment and, therefore, tend to judge themselves as ill prepared; alternatively, it may be that they were indeed less well prepared while at high school.

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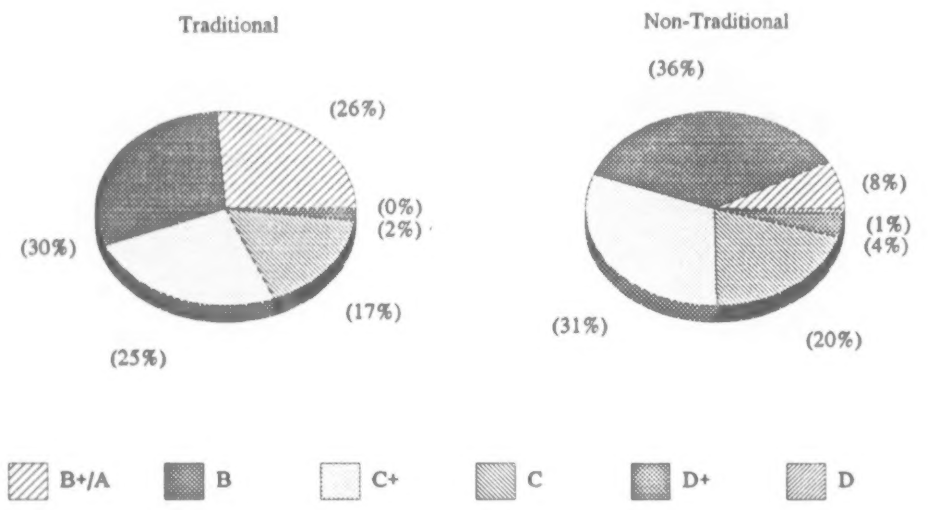
[112] Bishop and Van Dyk, 55

Academic Achievement

Academic achievement is reflected in the comparative high school GPAs of the two groups. The nontraditional student sample is more highly concentrated in the range 2.5-3.4 (C+/B), while the seniors are more likely to have higher grades (figure IV.1).

FIGURE IV.1 HIGH SCHOOL GPA OF TRADITIONAL VS. NONTRADITIONAL STUDENTS



Source: Appalachian Access and Success College Survey 1991

FAMILIAL INFLUENCES

In terms of parental encouragement, nontraditional students were less well served than the seniors. A lower proportion, 42.1 percent compared to 88.3 percent, answered that their parents had encouraged them; a higher proportion also claimed not to have received parental encouragement. This is perhaps not surprising given the evidence of the role of parental encouragement on higher education participation and the fact that this group chose not to enter college immediately upon high school graduation.

The parents of nontraditional students had, on average, a much lower level of education than those of the seniors. While 38.6 percent of seniors' mothers were educated above twelfth grade, only 13.6 percent of nontraditional students' mothers were as highly educated. Similarly, while 39.6 percent of seniors' fathers had an education beyond twelfth grade, only 18 percent of nontraditional students' fathers were educated to this level. Although the two sample groups are not strictly comparable, these findings can tentatively be read as confirmation that parental education is correlated with educational aspirations and achievement.

INSTITUTIONAL INFLUENCES

High School Curriculum

The feeling of unpreparedness for higher education exhibited by the nontraditional students could be a function of the type of high school curriculum followed. A lower proportion, 30.5 percent compared to 56.7 percent, of nontraditional students than seniors followed a college preparatory track in high school. They were also slightly more likely to have followed a vocational education curriculum, 18.3 percent against 10.5 percent, and more likely to have followed a general curriculum, 50.0 percent compared to 24.4 percent.

Their opinion of the job high school had done in promoting higher education was significantly lower than that of the seniors. Only 15.9 percent of the sample rated the high school as "good," compared to 42.8 percent of seniors. Similarly, 37.2 percent rated their high school's performance as poor, compared to only 9.6 percent of seniors giving the same rating.

First, it must be remembered that the college students have a reference point not available to seniors who have yet to experience college life. It may be that having been out of school, the relevant skills they previously possessed have been lost, suggesting a need for some type of return-to-study program to help nontraditional students in the transition back into education. Second, the feeling that their high schools did not do a good job of promoting higher education would in part explain why the nontraditional students missed the post-high school opportunity.

A much smaller group of college students than seniors believed their high school had given them sufficient information on financial aid. Only 18.6 percent of college students compared to 70.2 percent of seniors answered yes to this question and more than twice as many college students as seniors answered no. Again, this finding may in part be because the college students have first-hand knowledge of the costs of being in college, while seniors are merely making estimates of future costs. It could also be that seniors are better able to recall the information, having recently received it. This says nothing, however, about the accuracy of the information received.

A higher proportion of seniors, 59.0 percent, believed that their high school had given them sufficient information on careers requiring training. In comparison, only 22.6 percent of college students felt they had received sufficient information, and twice as many college students as seniors felt this had *not* been the case. Experience in the labor market, or more general life experience, once more gives the nontraditional student a reference point from which to make a judgement about the validity and quantity of information received in high school. Obviously, the seniors do not have firsthand access to this knowledge. There may be a role here for bringing recently graduated high school students back into their high schools to share their post-graduation experiences and knowledge. The small age disparity between the audience and the presenter would increase the credibility of the source.

These results are not surprising given that the group, by virtue of their having returned to education, may well be in the process of attempting to rectify skill deficiencies that have become apparent since graduation from high school. This explanation is, of course, predicated on the assumption that their motivation for attending college is utilitarian. Previous citations have shown that it would be fallacious to generalize this assumption. However, goal-oriented motivations, such as the desire for increased income or a "better" job, do account to a significant extent for nontraditional students' motivations to return to education.[113]

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[113] For example see Rogers, Gilleland, and Dixon, 206.

BARRIERS AND INFLUENCES

Influences

The most frequently cited influences on the decision of nontraditional students to return to college were parents, peers/friends, and other relatives, in descending order. It is rather surprising that parents were still regarded as a major influence; the literature would not lead one to expect this to be the case for nontraditional students.

Perhaps more instructive, however, is that 51 individuals, 31.1 percent of the sample, cited "self" as their greatest influence. Among the seniors, only 11.3 percent of the sample were similarly self-motivated. This is suggestive of a high degree of motivation for older students. The least commonly cited influences for college students were teachers, college representatives, and employers.

Barriers

The most important barriers to enrollment were--in descending order--lack of finances, lack of information about financial aid, poor self-image, and lack of information on college educational programs. Poor self-image was mentioned by a third of the sample, which is contradicted, somewhat, by lack of ability being mentioned by only 18.3 percent of the sample. Both economic barriers and informational needs are possible points of intervention to increase access to education.

In line with the above findings, financial aid availability is one of the most important factors considered when choosing a college. Its median ranking was first place, and it was mentioned by 59.8 percent of the sample. College location and program offerings were cited as important factors by more respondents, 67.1 percent and 78.7 percent of the sample respectively, but the median ranking was second place. The reputation of the college was considered important by 40.2 percent of respondents.

The barriers and influences reported were remarkably similar to those reported by seniors. Some of the responses were contradictory to some of the literature on nontraditional student college choice behavior, but this could be a function of the small sample size.

A. ECONOMIC INFLUENCES

This section provides an overview of the economic environment in Ohio Appalachia. A number of different indicators are used to illustrate the changes that the region underwent during the 1980s and continues to experience. A brief examination of economic determinants of educational access is followed by a description and analysis of the 29-county region's economy.

ECONOMIC INFLUENCES ON EDUCATIONAL ACCESS

An analysis of the economic status of the region is highly pertinent to a consideration of participation rates in higher education. Both the overall health and composition of the regional economy are determinants of educational access. In turn, the level of education of a region's population affects its economic potential. This is increasingly true where the labor market is demanding skill levels[114] that poorer rural youth will be unable to supply unless educational access is improved. Although there are many influences other than economic on the decision to participate in higher education, the ease and effectiveness with which policy intervention can occur in this area make it especially important to consider.[115]

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[114] M. L. Blackburn, D. E. Bloom, and R. B. Freeman, "The Declining Economic Position of Less-Skilled American Men," National Bureau of Economic Research, 1989, NBER 3186.

[115] Jerry S. Davis and Kingston Johns, Jr., "Low Family Income: A Continuing Barrier to College Enrollment?" Journal of Student Financial Aid 12 (February 1982): 5-10.

Family Income

The ability to pay for an education as well as the socioeconomic status of a student's family jointly affect the participation rate.[116] For example,

> data for 1990 from the Current Population Survey show that low levels of educational attainment are clearly associated with high poverty rates in the United States, even when controlled for ethnicity.[117]

Pelavin and Kane found that students with family incomes below $15,000 are less than half as likely to pursue higher education than those with family incomes above $25,000.[118] Thus, lower than average per capita and family incomes in Ohio Appalachia than in the state and the United States account to a large extent for the poor participation rate.

Regional Economic Structure / The Labor Market

Family income alone, however, is not the sole economic determinant of higher education participation. The human capital model assumes that an individual's decision to go on to higher education will in part be influenced by a judgement about the expected future earnings to be gained as a result of higher educational attainment. This involves an assessment, albeit crude, by the potential student of the likelihood of attaining the desired level of future income either with or without the additional education.[119]

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[116] Winship C. Fuller, Charles F. Manski, and David A. Wise, "New Evidence on the Economic Determinants of Postsecondary Schooling Choices." The Journal of Human Resources XVII (Fall 1982): 477-98; Stafford, Lundstedt, and Lynn; Stage and Hossler; Borus and Carpenter; Thomas G. Braun, "An Analysis of the Effects of Geographic-Demographic Factors on College Attendance," Research in Higher Education 19, no. 2 (1983): 131-52; J. S. Davis and K. Johns, "Low Family Income: A Continuing Barrier to College Enrollment?" Journal of Student Financial Aid 12 (February 1982): 5-10.

[117] CEOGC, 92

[118] Pelavin and Kane, 37.

Paulsen reports findings that a student is more likely to attend college when college graduates are in greater demand in the labor market and when non-college graduates face fewer job opportunities. In addition, evidence suggests that this effect is stronger for students from lower-income families.[120] Thus, where there are fewer job opportunities for non-college graduates, the probability of entering higher education increases at a higher rate for lower-income individuals than higher-income individuals. Ohio Appalachia, with its concentration of lower-income families and changing industrial structure, should--following this argument--be experiencing increasing demand for higher education. The participation rate figures indicate that this did indeed occur during the latter half of the 1980s (see table 0.1).

Although it was not explored in this study, it would be interesting to know the geographic extent of the region that high school students consider for future employment possibilities. Many students in Ohio Appalachia almost certainly consider employment opportunities outside the region.[121] Thus, although the condition of the regional economy is an important determinant of higher education participation rates, the health of the wider economy, however each individual defines this, must also be taken into consideration.

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[119] Stafford, Lundstedt, and Lynn, 593.

[120] Paulsen, 29.

[121] See page 30 for a discussion of the high school students' intentions to remain in or leave the region.

Educational Attainment and the Regional Economy

The relationship between a region's economic well-being and the educational level of its residents is dynamic and self-reinforcing:

> a low participation rate may affect the economic and social well-being of a state because it results in an insufficiently educated labor force that is poorly positioned to respond to emerging economic and social conditions and the growing challenges of high-technology.[122]

As this is true for a state, so it holds for regions within a state. Areas with low levels of education, where families have low socioeconomic status, will tend to reproduce the characteristics over time, as will individual families. If the situation is to improve, this cycle must be broken through intervention at one or more points. If this cannot be achieved, Ohio Appalachia is likely to become increasingly differentiated and marginalized from the rest of the state.

In 1980, Ohio was the thirty-third highest state in terms of the percentage of the population enrolled in public and private institutions of higher education.[123] Circumscribed educational access for the state as a whole compromises Ohio's future economic viability. As has been shown, Ohio Appalachia exhibits a participation rate significantly lower than that of the state as a whole. The increasingly weak economic base in the region thereby hurts not only the region itself, but also diminishes its contribution to the health of the state's economy:

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[122] Stafford, Lundstedt, and Lynn, 591.

[123] Ibid., 592.

> Skills and economic growth are interdependent . . . a less skilled workforce will impede economic growth and improvements in productivity.[124]

Across the nation, "the 1980s saw the deterioration of several industries important to rural America;"[125] Ohio Appalachia was no exception to this trend. Declining manufacturing employment "had a devastating impact on all young people, but its impact was especially severe for those with deficiencies in basic education and skills."[126]

The economy of Ohio Appalachia traditionally had a strong base in the extractive and heavy manufacturing industries. The industries, while offering very high wages for semi and unskilled workers, did not in general demand a high level of formal education. This is typical of rural areas, which often exhibit highly undiversified economies. One sector--mining, for example--is typically relied upon as a source of economic development. Although this may provide wealth in the short term, it does little to broaden the skill base within the economy and thus renders it vulnerable to structural change.

As Ohio Appalachia's traditional economic base continues to decline, rural communities will have to seek an alternative basis for economic development. Whatever this may be (high-technology industry is believed to have a great deal of potential in this role[127]), it is likely to require higher levels of skill in the labor force than has previously been the case.[128] If rural areas are to be competitive, the required skills will have to be inculcated in the local labor force.

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[124] Berlin and Sum, 26.

[125] Pollard and O'Hare, iii.

[126] Berlin and Sum, 12.

[127] See Glasmeier.

The lack of opportunities within the rural community has led to high rates of outmigration among young people, particularly among those with higher levels of education (appendix III, table V.1). Those who remain in the area tend to be the individuals with lower levels of skill and education.[129] The challenge to rural areas such as Ohio Appalachia is therefore twofold: to endow its youth with the skills necessary to take advantage of economic opportunities and, simultaneously, to create opportunities within rural areas to arrest and reverse the relative decline that has occurred in the past decade.

THE ECONOMY OF OHIO APPALACHIA

The Ohio Appalachia region is examined as a whole to provide a general picture of its characteristics. Within the region, however, there is a great deal of diversity. For example, to say that Ohio Appalachia has suffered from the decline of the coal mining industry would be correct but misleading if generalized to all counties. Coal mining was concentrated in only some counties of the region, which have thus tended to bear the brunt of its relative demise. To give a more representative account of the region's characteristics, counties or subregions that exhibit characteristics distinct from those of the wider region are highlighted and discussed.

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[128] See, for example, Berlin and Sum, 13; Fairweather, 3; Hersh, 5-8.

[129] Pollard and O'Hare, 2-3.

The indicators used to describe the economic environment are poverty and unemployment rates, per capita and family incomes, and employment by industrial sector.[130] To analyze the sectoral changes in employment during the period 1980-1989, a shift-share analysis was performed.[131] Shift-share is a simple methodology for studying the components of regional growth.[132] It is used here, however, purely as a descriptive tool to illustrate the sectoral changes in industrial composition for each county.

As noted in the introduction, the influence of Clermont County creates a problem when examining averages for the 29-county region. For example, if Clermont County is included in the shift-share analysis, the employment growth rate of the region is 8.6 percent--representing a gain of 25,296 jobs--compared to a national rate of only 3.8 percent. This picture is clearly unrepresentative of the region's overall character. Excluding Clermont County, the growth rate is 3.9 percent. This high rate of employment growth in Clermont County was largely the result of development spillover from Cincinnati during the 1980s and was concentrated in the northwest quadrant of the county. Regional averages, unless noted in the text, refer to the 28-county region *excluding* Clermont County.[133]

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[130] Data for each of these variables are presented at the county level in appendix III.

[131] 1989 was the most recent year of County Business Pattern data available at the time of this report's preparation. Changes since 1989 are analyzed with the aid of supplemental data.

[132] Francisco J. Arcelus, "An Extension of Shift-Share Analysis," Growth and Change 15 (January 1984): 2. For a description of the methodology, its uses, and limitations, see Darryl R. Holden, Alasdair G. M. Nairn, and J. K. Swales, "Shift-Share Analysis of Regional Growth and Policy: A Critique," Oxford Bulletin of Economics and Statistics 51, no. 1 (1989): 15-34.

[133] The summary tables in appendix II show regional averages both including and excluding Clermont County.

Per Capita and Family Income

The family plays a role as a resource provider for the high school senior wishing to continue on to higher education. Below-average family income is therefore a significant barrier to educational access. The median family income for Ohio in 1989 was $34,531, while in the 28-county region it was only $25,802. With the exception of Clermont, no county within the region has a median family income above $30,000. The range is fairly evenly distributed from a low of $21,226 in Adams County to a high of $29,863 in Washington County (table V.2). The impact of the lower family incomes in Ohio Appalachia is increased by the larger average family size in the region compared to the state as a whole, as limited economic resources are distributed among more family members (appendix III, table V.3).

Per capita income figures are closely correlated with family incomes. The average per capita income in Ohio is $13,461; the only Appalachian county approaching this is again Clermont, with a per capita income of $13,338, compared to the 28-county average of $9,808. Per capita income is important as an indicator of the level of resources available to families to provide financially for their children. The significantly lower income levels in Ohio Appalachia in comparison to the rest of the state create a financial barrier to higher education. In addition, those who receive higher education will be more likely to leave the region to seek employment that offers higher wages elsewhere.

Poverty and Unemployment

As might be expected, unemployment is higher in Ohio Appalachia than the remainder of the state. The average unemployment rate in the 28-county region in 1990 was 8.0 percent, in comparison to 6.5 percent for Ohio. Monroe, Perry, Harrison, and Adams Counties all suffer from unemployment rates above 10 percent (table V.2). The high rates of unemployment are all the more significant when one examines the types of jobs that have been lost. In each of the four counties, with the exception of Adams, the unemployment is mainly explained by large job loss during the 1980s in the high-wage mining sector. Adams County had the majority of its job losses in manufacturing, again a sector paying high wages to semi and unskilled workers. Holmes County has the lowest unemployment rate in the region, 4.7 percent, but this is probably a function of the large Amish population, as explained in the introduction, page 25.

The unemployment rate, although often used as an indicator of the economic well-being of a region, is, however, an insufficient and at times misleading measure of local economic disadvantage.[133] This is due both to the inadequacies of the standard federal definition of unemployment[134] and the rise in numbers of "working poor"[135] during the 1980s. The federal definition of unemployment excludes both "discouraged workers," those who would like to work but are not actively seeking employment in the belief that opportunities are unavailable, and "involuntary part-time workers," workers who would prefer to be in full-time employment but are unable to find it and therefore remain in part-time positions.[136] Both the poverty rate and the structure of an economy must be analyzed to gain a clearer picture of the economic resources available to support educational participation.

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[133] CEOGC, 56.

[134] For a more complete discussion, see Isaac Shapiro, Laboring For Less: Working But Poor In Rural America (Washington, DC: Center on Budget and Policy Priorities, 1989), 29.

[135] Ibid., xi.

[136] Ibid., 29.

TABLE V.2
ECONOMIC CHARACTERISTICS OF OHIO APPALACHIA

REGION	PER CAPITA INCOME 1989[a]	MEDIAN FAMILY INCOME 1989	POVERTY RATE 1990	UNEMPLOYMENT RATE 1990
Ohio	13,461	34,351	15.0	6.5
Appalachia	9,929	26,171	23.1	7.9
Appalachia (exc. Clermont)	9,808	25,802	23.6	8.0
Adams	8,407	21,226	32.9	12.0
Athens	9,170	25,702	24.2	5.9
Belmont	10,329	25,945	20.5	5.7
Brown	10,498	28,840	24.6	7.9
Carroll	10,693	29,341	22.6	6.2
Clermont	13,338	36,511	10.2	5.0
Columbiana	10,567	27,666	20.9	5.9
Coshocton	10,685	28,606	18.1	6.5
Gallia	9,711	25,077	25.6	7.7
Guernsey	9,929	25,225	25.9	8.7
Harrison	9,146	24,432	32.4	11.1
Highland	9,848	26,224	21.4	8.0
Hocking	10.265	26,715	18.0	9.4
Holmes	9,191	27,531	22.3	4.7
Jackson	9,228	22,611	23.3	8.5
Jefferson	11,001	27,839	22.6	6.1
Lawrence	9,336	23,603	27.5	6.2
Meigs	8,644	21,884	27.6	7.5
Monroe	9.101	24,162	27.5	10.8
Morgan	9,373	25,847	21.0	8.7
Muskingum	10,844	29,480	18.1	8.5
Noble	9,028	25,625	29.5	8.5
Perry	9,247	24,985	18.5	11.9
Pike	8,958	22,567	32.1	9.7
Ross	10,758	28,634	18.2	8.1
Scioto	9,253	21,848	25.6	8.7
Tuscarawas	11,141	29,303	12.9	6.4
Vinton	8,826	21,693	33.5	9.1
Washington	11,438	29,863	13.6	6.0

Sources: CEOGC, 139; Bureau of the Census, 1990 Census of Population and Housing. Summary Social, Economic and Housing Characteristics Ohio 1990 CPH-5-37 (Washington, DC: Government Printing Office, 1992): 237; Sam Crawford, Ohio Appalachian Counties (Jackson: Ohio Cooperative Extension Service, Ohio State University, 1992), 69.

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[a] 1989 dollars.

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As figure V.1 demonstrates, the relationship between poverty rates and unemployment is not simple. Between 1980 and 1991, the overall poverty rate in Ohio grew by 37 percent, with fluctuations during this period.[137] Whereas unemployment in Ohio peaked in 1982 at 12.5 percent and then fell until 1989, poverty rates for the state continued to climb throughout the decade.

With the exception of Ashtabula County in northeastern Ohio, all the poorest counties in the state are in the Appalachian region. Of the fifteen counties with poverty rates above 23 percent, fourteen are Appalachian.[138] Thus Appalachia, despite having only a small proportion of the state's population, "retains Ohio's most severe concentration of economic disadvantage in 1991."[139] Poverty increases as you travel from the northwest to the southeast of Ohio. The highest poverty rates are concentrated in the Appalachian counties.[140] During the 1970s, poverty rates in Appalachia declined by 18 percent. Since 1980 the region has experienced a 66 percent increase in the poverty rate, leaving it in a worse position now than twenty years ago.[141]

One must also bear in mind that as poverty has increased over the period from 1980 to 1991, "funding for the state's anti-poverty programs has been simultaneously reduced by 59%."[142] Also, as unemployment started to fall at the end of the 1980s, the poverty rate continued to climb, thus illustrating the

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[137] CEOGC, 3.

[138] Ibid., 24.

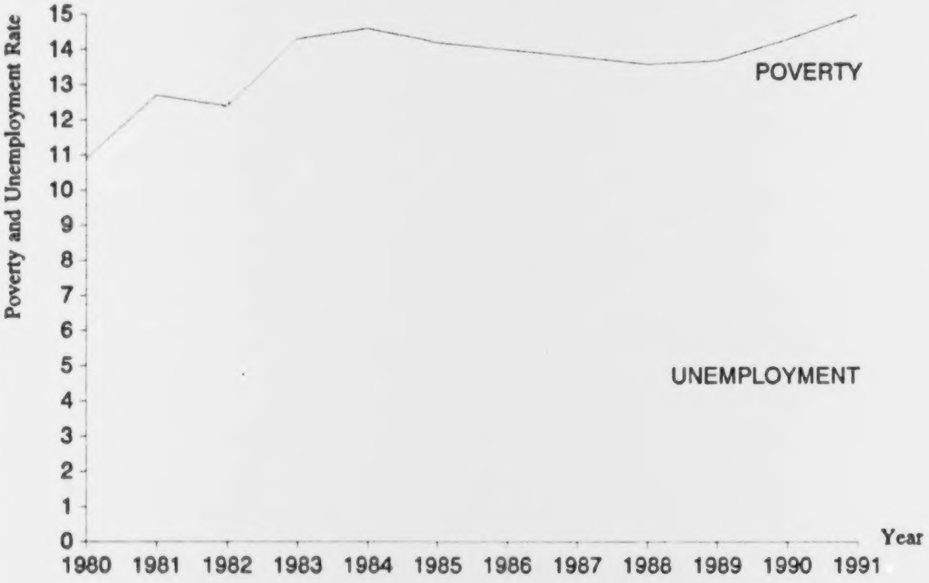
[139] Ibid., 51.

[140] Ibid., 53.

[141] Ibid., 51.

[142] Ibid., 5.

FIGURE V.1 OHIO UNEMPLOYMENT AND POVERTY RATES 1980-1991



Source: CEOGC and Ohio Bureau of Employment Services

divergence between the two indicators.

Although figure V.1 shows major declines in unemployment during the latter part of the 1980s, this "did not lead to comparable reductions in economic disadvantage within Ohio."[143] The major reason for this is the change in industrial composition. "The most important cause of Ohio's poverty rate growth has been a major shift in the state's economy . . . 23 percent of Ohio's manufacturing jobs have disappeared since 1979."[144] Those jobs created have been predominantly in low-wage occupational sectors. This effect is compounded by the 12 percent decrease in average earnings in the remaining manufacturing jobs.[145]

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[143] Ibid., 60.

[144] Ibid., 4.

It has been demonstrated that "increased levels of education are associated with substantially reduced risk of poverty in the United States."[146] If Ohio Appalachians are to improve their standard of living, they will have to increase their level of educational attainment.

Structural Change in the Ohio Appalachia Economy

Between 1980 and 1989, the 28-county region made a net gain of 10,940 jobs, a 3.9 percent rate of growth. This compares to national growth of 3.8 percent over the same period (table V.4).

These apparently impressive figures should not, however, lull one into an overly optimistic impression of the region. Although there were job losses recorded in three of the nine one-digit Standard Industrial Classification (SIC) categories, the vast majority of the losses were in just two sectors: mining and manufacturing. The former, which on average is the highest paying sector at this level of aggregation[147], lost 9,675 jobs, 49.7 percent of the total mining employment. Manufacturing industry, meanwhile, lost 11,480 jobs, which represents an 11.7 percent decrease in total manufacturing employment. At the one-digit SIC level of aggregation, all other sectors showed job gains, with the

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[145] Ibid., 5.

[146] Ibid., 92.

[147] Data on the average wages across industrial categories at the one- and two-digit SIC level are presented in the wage data tables in appendix III.

TABLE V.4
APPALACHIAN REGION EMPLOYMENT GROWTH BY COUNTY 1980-1989

REGION	% GROWTH	ABSOLUTE GROWTH	RANKED BY % GROWTH
United States	3.8	2,836,397	-
Appalachian Region	8.6	25,296	-
Appalachian Region (exc. Clermont)	3.9	10,940	-
Adams	-16.2	-395	26
Athens*	27.6	2,195	3
Belmont*	-23.9	-4,771	28
Brown	13.0	599	9
Carroll	18.2	669	4
Clermont	92.8	14,356	1
Columbiana	5.5	1,413	15
Coshocton*	14.9	1,620	7
Gallia	9.7	697	10
Guernsey*	1.9	224	20
Harrison	-40.0	-1,756	29
Highland	15.3	982	6
Hocking	2.6	130	19
Holmes	57.5	3,366	2
Jackson	9.0	531	11
Jefferson*	-11.4	-2,772	24
Lawrence*	3.2	245	18
Meigs	5.6	215	14
Monroe	-17.3	-1,094	27
Morgan	-13.9	-460	25
Muskingum*	16.5	3,932	5
Noble	-5.3	-100	23
Perry	3.9	186	17
Pike*	5.8	338	13
Ross*	7.0	1,104	12
Scioto*	4.3	666	16
Tuscarawas	13.3	3,168	8
Vinton*	-4.8	-104	22
Washington	0.7	121	21

* County selected for the survey

Source: ILGARD shift-share analysis, 1992 exception of transport and public utilities, where there was a minor loss of 74 jobs.

The largest gains were in the service sector, exhibiting a net increase in employment of 20,880, or 41.6 percent, over the nine-year period. Second to this comes the retail trade sector, which grew by 9,801 jobs, a 16.1 percent increase. Of the nine one-digit sectors analyzed, these were the third lowest and lowest paying sectors, respectively.

Looking at the more detailed two-digit SIC level can give a clearer picture of changes. Of 64 sectors represented in the regional economy, employment fell in 28. The largest declines, in descending order, were in the primary metal industries, which lost 9,628 jobs; the bituminous coal and lignite industry, which lost 7,523; machinery manufacturing, which lost 3,895; and stone, clay, and glass product manufacturing, which lost 3,728. Six other sectors lost over 1,000 jobs each.

Employment increases were registered across a wide range of sectors, with over 15 sectors adding more than 1,000 jobs. The largest gains were in health services, with 9,661 new jobs; eating and drinking places, showing gains of 6,486; lumber and wood products, increasing employment by 3,783; and business services, with just over 3,000 new jobs. Three of the sectors offer relatively low-wage earning opportunities, while health services can offer mid-level wages. Of the four sectors, health services is the one that would on average require higher levels of formal education, once more reinforcing the link between education and economic opportunity.

Eight counties in the 29-county region lost jobs, while in the other 21 employment growth ranged from 0.7 percent in Washington County to 92.8 percent in Clermont County (table V.4). The highest percentage losses were in Harrison County, which lost 40.0 percent of its employment and Belmont County, which lost 23.9 percent of its employment (appendix III table V.5). Twelve counties experienced proportionally heavy losses in either mining or manufacturing sectors; four of them predominantly in mining and eight mainly in manufacturing. There was a concentration of particularly high losses in these sectors in the northeast part of the region: Belmont, Harrison, Jefferson, and Monroe Counties.

In general, job gains occurred in the retail and service sectors. Exceptions to this trend include Coshocton County, which gained 852 manufacturing positions, and Holmes County, which gained 1,958 manufacturing positions, the majority of them in the lumber and wood products sector.

One local economic development professional observed that "as long as we don't lose any more jobs in coal and steel, we've gone through the worst of it."[148] Apart from counties such as Meigs, which is still highly vulnerable due to its dependence upon the mining sector, Ohio Appalachia may well have already suffered the worst of the structural changes affecting the whole nation. Now the economy must be reconstructed in a different image. This will demand a different style of economic development.

Human capital is increasingly the factor of production that creates competitive advantage; natural resources are declining in importance and global capital markets are becoming more efficient. Rather than trying to attract large companies to the area or relying on natural resources, economic development will have to be more concerned with creating sustainable employment utilizing the region's human resources. The role of education will become ever more important in preparing people for the labor market.

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[148] Interview with Don Myers, Belmont County Department of Development, May 1992.

The overall picture is of an economy increasingly devoid of its basic industries. The future of the area will require generating employment opportunities to retain the region's young people, particularly those with higher levels of education. According to a recent study of educational and occupational aspirations of twelfth grade students in Ohio, rural students tend to aspire to occupations that are not represented within their communities.[149] If they follow through with this desire, the human capital stock of the region is depleted, further weakening its future economic base.

Declines in manufacturing employment have impacted everyone in the labor market. The individuals most affected, however, are those with lower levels of education and basic skills.[150] This focuses attention once more on the dilemma faced by Ohio Appalachia: the region must equip its youth with the skills necessary for employment opportunities, while simultaneously revitalizing the economy to create new jobs. The failure to achieve both of these objectives will cause Ohio Appalachia to lag further behind the state.

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[149] McCracken and Barcinas, 9.

[150] Berlin and Sum, 12.

B. DEMOGRAPHIC INFLUENCES

This section examines the demographic characteristics of Ohio Appalachia. A number of different indicators are used to illustrate present conditions, changes during the 1980s, and some limited projections into the future. Demographic influences on educational access are first discussed in terms not specific to the region, followed by a description and analysis of the Ohio Appalachia's demographic attributes. As in the previous section, regional averages, unless otherwise noted, are for the 28-county region *excluding* Clermont County.

DEMOGRAPHIC EFFECTS ON EDUCATIONAL ACCESS

Demographic factors are considered from two perspectives. First, the size and age structure of the region's population determines the size of the potential college student population. Second, certain demographic factors, such as family structure and race, are correlated with educational attainment.

The racial composition of the region was *not* determined to be an important influence in the context of the present study. Ohio Appalachia is very racially homogeneous, its population being over 97 percent white. African Americans, the second largest racial group in the region, represent only 2 percent of the population, compared to 11 percent in Ohio.

Although there is still controversy in the literature over the issue of racial determinants of higher education access, it has generally been found that race itself is not the causal factor; rather, it is the variables correlated with race that lead to lower probabilities for minorities to attend college.[151] In addition,

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[151] See, for example, Borus and Carpenter, 174.

Mortenson found that "after 1984 the difference between the black and white college enrollment rate appears to have narrowed, especially for nonmetropolitan blacks."[152] Taken together, these three factors sufficiently justify the lack of consideration given in the present study to racial barriers to educational participation.

Nonwhites will, however, comprise an increasingly large proportion of the traditional college-age population in the future.[153] To the extent that the Ohio Appalachia nonwhite population increases in size, racial barriers to educational attainment, if these exist above and beyond barriers related to class and socioeconomic status, could become an important factor to consider.

There is substantial evidence that a student's household structure has an observable influence on aspirations for, and likelihood of, higher education. Stage and Hossler found that if a student's parents are married, this slightly increases the probability of participating in higher education.[154] Similarly, McCartin and Meyer found that:

> the traditional family constellation with two parents was likely to produce adolescents with higher academic success and plans to gain additional schooling.[155]

They also observed, however, that this finding was explained in part by the higher socioeconomic status of families with two incomes. It is certainly still the case "in both Ohio and the United States that the poorest demographic group is unquestionably households that are headed by single female parents."[156] At least to the extent that family income exerts an influence on higher education participation, family structure will be correlated with lower rates of educational attainment.

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[152] Mortenson and Wu, 44.

[153] James R. Mingle, Focus on Minorities: Trends in Higher Education Participation and Success (Denver: Education Commission of the States and State Higher Education Executive Officers, 1987), ix.

[154] Stage and Hossler, 312.

[155] McCartin and Meyer, 390.

Finally, the age structure of a population has a vital influence on participation rates: it determines the size of the potential pool of college goers. The size of the traditional college population, 18 to 24 years old, although an important factor to consider, should not be examined in isolation; nontraditional-age students are enrolling at increasingly high rates which may, to some extent, compensate for changes in the number of traditional-age students.

In addition, education is becoming less of a once-in-a-lifetime event. As rapid technological change continues, individuals are finding that new skills must be acquired during their working lives. Institutions of higher education will doubtless play an increasingly significant role in this process.

REGIONAL DEMOGRAPHIC CHARACTERISTICS

Population Change

The Appalachian region's 1,372,893 residents, including Clermont County, in 1990 accounted for 12.7 percent of Ohio's population (table V.6), a very slight decrease from 1980. Excluding Clermont County, which gained 21,704 people over the decade, the 28-county region lost 24,878 people, approximately 2 percent

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[156] CEOGC, 86.

TABLE V.6
OHIO APPALACHIA POPULATION CHANGE 1980-1990 AND POPULATION PROJECTIONS FOR 2000 AND 2010

REGION	TOTAL POPULATION		PERCENTAGE CHANGE	POPULATION PROJECTIONS	
	1980	1990	1980-1990	2000	2010
Ohio	10,797,630	10,847,115	0.5	10,533,087	13,398,336
Appalachia	1,376,067	1,372,893	-0.2	1,395,521	1,379,401
Appalachia (exc. Clermont)	1,247,584	1,222,706	-2.0	1,232,357	1,202,438
Adams	24,328	25,371	4.3	25,255	24,622
Athens	56,399	59,549	5.6	60,770	62,494
Belmont	82,569	71,074	-13.9	76,112	71,768
Brown	31,920	34,966	9.5	38,755	41,246
Carroll	25,598	26,521	3.6	30,988	32,287
Clermont	128,483	150,187	16.9	163,164	176,963
Columbiana	113,572	108,276	-4.7	104,699	99,417
Coshocton	36,024	35,427	-1.7	37,131	37,097
Gallia	30,098	30,954	2.8	29,002	28,182
Guernsey	42,024	39,024	-7.1	38,964	37,533
Harrison	18,152	16,085	-11.4	11,759	9,836
Highland	33,477	35,728	6.7	35,821	35,754
Hocking	24,304	25,533	5.1	25,339	25,014
Holmes	29,416	32,849	11.7	31,734	32,284
Jackson	30,529	30,230	-1.2	26,798	24,553
Jefferson	91,564	80,298	-12.3	75,124	68,018
Lawrence	63,849	61,834	-3.2	58,308	54,945
Meigs	23,641	22,987	-2.8	22,583	21,187
Monroe	17,382	15,497	-10.8	13,307	12,088
Morgan	14,241	14,194	-0.3	13,353	12,914
Muskingum	83,340	82,068	-1.5	84,953	82,856
Noble	11,310	11,336	0.2	10,961	10,944
Perry	31,032	31,557	1.7	33,497	33,800
Pike	22,802	24,249	6.3	27,159	27,211
Ross	65,004	69,330	6.7	74,888	76,479
Scioto	84,545	80,327	-5.0	81,773	77,515
Tuscarawas	84,614	84,090	-0.6	85,468	83,417
Vinton	11,584	11,098	-4.2	10,829	10,065
Washington	64,266	62,254	-3.1	67,027	68,912

Source: U.S. Department of Commerce: Bureau of the Census, 1990 Census of Population and Housing by County-Ohio (Washington, DC, Government Printing Office, 1992); U.S. Department of Commerce, Bureau of the Census. 1980 Census of Population. General Social and Economic Characteristics-Ohio, (Washington, DC: Government Printing Office, 1983); Ohio Data User's Center Population Projections, Populations Projections Ohio and Counties by Age and Sex: 1980 to 2010 (Columbus: Ohio Data User's Center, Department of Development, 1985).

of its population. This decline is almost completely accounted for by heavy losses, in both absolute and percentage terms, in four counties: Belmont, Harrison, Jefferson, and Monroe. These are the same four counties that suffered the largest declines in their manufacturing and mining sectors.

With the exception of these four counties, Clermont County, and Holmes County, which increased its population by 3,433, or 11.7 percent, the magnitude of changes in the remaining counties was generally small. Of these 23 counties, 11 made small gains and the remaining 12 counties recorded net losses.

This change in population can be accounted for in two ways: net migration, which measures the number of people moving into the region minus the number of people moving out of it, and general demographic trend shifts such as changes in birth and death rates, both in the present and as a result of the cumulative effects of past changes.

Net Migration

Excluding Clermont County, the 28-county region experienced lower rates of net migration than the rest of the state in all age groups *except* 20-34 years (appendix III table V.1). Ohio's overall net migration rate from 1980-1990 was 5.7 percent, while in Appalachia it was 6.8 percent. In the 20 to 34 year-old group, however, Appalachia's net migration rate was 21.3 percent while Ohio's was 9.7 percent.

The 20 to 34 year-old group constitutes a large proportion of the economically productive section of the population. Although it cannot be confirmed from the data used herein, it is likely that those 20-34 year-olds leaving the region are more highly educated than those remaining. They are leaving in order to find employment that is not available in the region.

Outmigration in this age group accounts for 68.3 percent of the total net migration for the region. Counties suffering particularly high rates of outmigration in this age group include Belmont, -44.5 percent; Harrison, -45.3 percent; and Monroe, -50.0 percent. Only two counties experienced positive net migration in this age group: Clermont County, 6.7 percent, and Athens County, 8.5 percent.

Overall, there are no other clearly discernible trends in net migration. Small amounts of in- and outmigration--with slightly more out- than inmigration--are apparent across the Ohio Appalachia region. Two counties stand out with significantly higher outmigration than the rest of the region: Monroe, -15.2 percent, and Jefferson, -15.1 percent.

Under 18 Population

The proportion of the population under 18 years of age offers an indication of the potential future size of the traditional-age potential college student population. Whereas between 1980-1990 Ohio's under-18 population shrank by 8.8 percent, that of the Appalachian region fell by 21.8 percent (table V.7). Every county made losses of above ten percent except Holmes, -2.5 percent, and Clermont, -6.7 percent. This decline in the under-18 age group is predominantly explained as the tail end of the lower post-baby-boom birth rates. Children of the baby boom are being replaced by smaller numbers of cohorts born after 1965.[157]

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[157] Fishlow, i.

TABLE V.7
UNDER 18 POPULATION CHANGE 1980-1990 IN OHIO APPALACHIA

REGION	UNDER 18 POPULATION		PERCENTAGE CHANGE
	1980	1990	
Ohio	3,094,000	2,823,000	-8.8
Appalachia	459,960	366,839	-20.2
Appalachia (exc. Clermont)	412,742	322,793	-21 8
Adams	8,719	7,358	-15.6
Athens	18,424	12,131	-34.2
Belmont	24,981	16,846	-32.6
Brown	11,386	10,012	-12.1
Carroll	8,880	7,252	-18.3
Clermont	47,218	44,046	-6.7
Columbiana	37,086	28,805	-22.3
Coshocton	11,838	9,679	-18.2
Gallia	9,858	8,266	-16.1
Guernsey	13,622	10,477	-23.1
Harrison	5,867	4,067	-30.7
Highland	11,070	9,792	-11.5
Hocking	8,199	6,793	-17.1
Holmes	12,075	11,773	-2.5
Jackson	10,269	8,303	-19.1
Jefferson	27,990	18,947	-32.3
Lawrence	21,855	16,707	-23.6
Meigs	7,811	6,182	-20.9
Monroe	5,850	3,987	-31.9
Morgan	4,870	4,070	-16.4
Muskingum	28,157	21,921	-22.1
Noble	3,834	3,282	-14.4
Perry	11,182	9,148	-18.2
Pike	7,920	6,965	-12.1
Ross	20,746	17,333	-16.5
Scioto	27,931	21,500	-23.0
Tuscarawas	26,848	22,152	-17.5
Vinton	4,024	3,077	-23.5
Washington	21,450	15,968	-25.6

Source: U.S. Bureau of the Census, Census of Population and Housing, 1990: Summary Tape File 1 on CD-ROM, Ohio, prepared by Bureau of the Census (Washington, DC: The Bureau, 1991).

A significant percentage, 11.8 percent, of the decline can, however, be accounted for by outmigration from the region.

This result indicates that, by virtue of the region's demographic attributes alone, area colleges could expect to foresee enrollments declining in the near future. The potential pool of traditional-age college students has declined and will continue to decline in the future. Other factors, such as the condition of the labor market or a concerted effort to increase the participation rate, could be expected to offset this negative influence on total enrollment, however.

Dependency Ratios

Although conveying little directly about the size of the potential college-going population, dependency ratio data are an interesting indicator of the ability of a community to support itself economically. The higher the dependency ratio, the more people the earnings of economically productive members of the population have to support. In the context of the present study, this fact has great bearing on the impetus for Ohio Appalachia to increase the educational attainment levels of its population, so as to increase living standards and become more economically competitive.

Dependency ratios measure the number of economically non-productive individuals as a proportion of the economically active population (table V.8).[158] In all three dependency ratio measures, Ohio Appalachia displays a higher dependency than Ohio on the earnings of the economically active population. The Total Dependency Ratio of the 29-county region is 79.6 percent, significantly

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[158] The Aged Dependency Ratio is calculated by dividing the population of 65+ years by the population 20-64 years, then multiplying by 100. The Youth Dependency Ratio is calculated by dividing the population of 0-19 years by the population 2-64 years, then multiplying by 100. The Total Dependency Ratio is the sum of the Aged and Youth Dependency Ratios.

TABLE V.8
DEPENDENCY RATIOS IN OHIO APPALACHIA

REGION	AGED DEPENDENCY RATIO[a]	YOUTH DEPENDENCY RATIO[b]	TOTAL DEPENDENCY RATIO[c]
Ohio	22.3	49.9	72.2
Appalachia	24.9	53.7	79.6
Adams	24.9	58.8	83.7
Athens	16.3	49.8	66.1
Belmont	34.1	47.9	82.1
Brown	23.0	56.6	79.6
Carroll	24.3	53.8	78.1
Clermont	14.7	54.5	69.3
Columbiana	26.7	52.8	79.4
Coshocton	25.9	53.7	79.5
Gallia	22.5	53.0	75.6
Guernsey	27.0	53.8	80.8
Harrison	31.8	51.5	83.3
Highland	27.4	55.2	82.6
Hocking	23.3	51.9	75.3
Holmes	21.4	77.6	99.0
Jackson	25.2	54.9	80.2
Jefferson	30.6	47.5	78.1
Lawrence	23.5	53.4	77.0
Meigs	27.2	53.8	81.0
Monroe	27.9	50.9	78.9
Morgan	27.9	57.9	85.8
Muskingum	24.6	53.2	77.8
Noble	28.1	59.0	87.1
Perry	23.4	57.7	81.1
Pike	24.7	57.5	82.2
Ross	20.6	46.1	66.7
Scioto	26.8	53.7	80.6
Tuscarawas	26.5	51.4	77.9
Vinton	24.9	56.3	81.2
Washington	23.7	50.0	73.8

Source: Sam Crawford, Ohio Appalachian Counties, (Jackson: Cooperative Extension Service, Ohio State University, 1992), 5-8.

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[a] The Aged Dependency Ratio is calculated by dividing the population of 65+ years by the population 20-64 years then multiplying by 100

[b] The Youth Dependency Ratio is calculated by dividing the population of 0-19 years by the population 20-64 years then multiplying by 100.

[c] The Total Dependency Ratio is the sum of the Youth Dependency Ratio and the Aged Dependency Ratio.

higher than that of Ohio, 72.2 percent. Population projections for the region indicate that the Total Dependency Ratio will fall to 69.2 percent in the year 2000 and further to 65.3 percent in the year 2010. The larger portion of this decrease is accounted for by decreases in the Youth Dependency Ratio. In all time periods considered, Holmes County is an anomoly by virtue of its unusually high dependency ratio (see page 25 of introduction).

Population Projections

Population projections can give some idea of the future demographic environment that Ohio Appalachia educators will be facing. Whereas Ohio is forecasted to decrease its population 2.9 percent by the year 2000 and 4.7 percent by 2010, the Appalachian region is forecasted to increase population 0.8 percent by the year 2000 and lose only 1.7 percent of population by 2010. If Clermont County is included in regional averages, gains of 1.7 percent and 4.7 percent are forecasted for the years 2000 and 2010 respectively (appendix III table V.9).

The region exhibits similar changes across age groups, as does Ohio, but of a different magnitude. All age groups in the region will experience declines in population, except the 35 to 64 year-old group, which will increase in size 15.8 percent between the years 1990 and 2000 and 19.9 percent by 2010. When Clermont is included in the regional averages, population losses are slowed and gains occur in the over 65 year-old category. It is perhaps of most interest to note that the region's under-19 population is declining at a significantly lower rate than for Ohio, losing 13.9 percent compared to 21.0 percent by the year 2010. This bodes well for comparative future numbers of college-age individuals.

In summary, the decrease in both the under-18 population and the traditional college-age population correspond to national trends. These indicate that to the mid-1990s there will be a decline in these age categories, as children of the baby boom generation are replaced by a smaller number of persons born after 1965.[159]

Family Structure

Previous research has found that family structure is related to academic attainment. A student from a traditional family unit of two parents is more likely to aspire to college, having been more successful academically in high school.

In 1990, 61.1 percent of the 504,542 households in the 29-county region were married couples (table V.10). This was slightly higher than Ohio as a whole, with 56.1 percent of households married couples. The only significant deviations from around 60 percent are Athens County, 25.2 percent, explained by the influence of Ohio University, and Holmes County, 73.9 percent, explained by the large Amish population.

As might be predicted from this, Ohio Appalachia has a lower percentage of female-headed, single-parent households, 13.4 percent of households compared to 16.5 percent for the state as a whole. Following the findings in the literature, the lower number of nontraditional family structures is, therefore, one barrier that exerts less of an influence than in the rest of Ohio.

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[159] Fishlow, i.

TABLE V.10
HOUSEHOLD CHARACTERISTICS OF OHIO APPALACHIA

REGION	TOTAL HOUSEHOLDS 1990	% MARRIED COUPLES 1990	% FEMALE HEADED 1990
Ohio	4,087,546	56.1	16.5
Appalachia	504,542	61.1	13.4
Appalachia (exc. Clermont)	451,816	61.0	13.4
Adams	9,192	62.4	14.6
Athens	20,139	25.2	15.9
Belmont	28,161	58.3	15.0
Brown	12,379	65.5	12.2
Carroll	9,667	66.2	9.9
Clermont	52,726	65.4	12.7
Columbiana	40,775	61.5	13.8
Coshocton	13,433	62.3	11.8
Gallia	11,367	62.1	13.6
Guernsey	14,894	58.0	15.7
Harrison	6,111	62.8	12.1
Highland	13,230	62.5	13.3
Hocking	9,351	63.5	12.0
Holmes	9,315	73.9	7.4
Jackson	11,260	60.0	15.6
Jefferson	31,311	57.4	16.2
Lawrence	22,899	61.4	15.9
Meigs	8,662	61.6	13.5
Monroe	5,754	66.1	10.5
Morgan	5,170	63.7	12.5
Muskingum	30,753	58.5	15.8
Noble	4,137	65.2	10.1
Perry	11,264	63.6	13.2
Pike	8,805	60.1	16.2
Ross	24,325	60.0	15.1
Scioto	29,786	57.0	17.7
Tuscarawas	31,971	62.5	11.6
Vinton	4,069	63.5	12.0
Washington	23,636	61.8	12.5

Source: CEOGC, Table 12.

> American democratic ideals provide the foundation for an educational system which values universal access and participation. The American Dream of social mobility bases itself on the notion of universal educational opportunity . . . Education provides not only individual prosperity but also the social benefits of a competent work force and an informed electorate.[161]

This report examines the possible barriers that are acting to circumscribe access to higher education in the Ohio Appalachia region. These barriers are explored from the perspectives of high school students themselves, their parents, their school personnel, and a group of nontraditional students. Economic and demographic characteristics of the region are also analyzed.

The findings, in many ways, directly contradict prevailing stereotypes about Ohio Appalachians. Although there are undoubtedly cultural influences on the rate of higher education participation, the results of this study indicate that high school students in the region, rather than being anti-education, are more likely to be ill-informed about their options.

The high school seniors surveyed display a high level of interest in continuing their education at college. They aspire to careers which would bring them higher socioeconomic status than their parents; the majority want to leave the region in search of greater prosperity. The seniors are motivated to continue their education by both economic and noneconomic concerns: getting a job, earning more money, learning things of interest, and getting a general education.

Although they recognize the value of higher education, the seniors' level of participation remains distressingly low. Participation in Ohio Appalachia is lower than in Ohio and the United States. Although 80 percent of seniors surveyed express the desire to go to college, only about 30 percent of that same group are likely to do so immediately after high school. High school students are somehow being obstructed from realizing their college aspirations.

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[161] Caldwell and Trainer, 1.

The most important barriers to higher education mentioned by seniors, parents, and school personnel relate to financial concerns. Lack of finances and lack of information on financial aid are the barriers most frequently mentioned by all groups of survey respondents. This suggests that government financial aid programs have yet to achieve the goal of ensuring equal access.[162]

Family income has repeatedly been found to be a reliable indicator of whether an individual will attend college. Ohio Appalachia exhibits family incomes well below averages for Ohio and the United States. This is of particular concern where students place a high degree of reliance on their parents as providers of financial support. The majority of families are, however, unable to save for their children's college education.

In addition to the real barrier that the cost of higher education represents, there is a perceptual barrier: seniors tend to overestimate the cost of attending college. This misperception is indicative of one of the major barriers to educational access--seniors lack accurate and pertinent information on college costs and financial aid availability.

Lack of information presents a problem in more than the area of financial concerns. A large number of seniors also feel they have insufficient information on college education programs and the postsecondary training they would need in order to enter the careers they desire. The challenge is therefore to identify the most effective manner in which to deliver the information that is presently lacking.

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[162] Equal access "prevails if all individuals, regardless of differences in family background and parental wealth, face the same marginal cost of resources for college." Behrman, Pollak, and Taubman, 398.

The groups most influential on the decision to attend college are--in descending order--parents, peers, and teachers. Almost all the high school students surveyed feel their parents to be supportive of higher education and have discussed the prospect of college with them. Although the overwhelming majority of parents also claim to be supportive of higher education, most have no higher education themselves. The level of education in Ohio Appalachia is below national and Ohio averages; most of the seniors, if they attend college, would therefore be first generation college students. Though parents may be able to provide some basic level of support to their children, their lack of personal experience may curtail the amount of practical help they can provide in the process of applying for college and seeking financial assistance.

The process of applying for college and financial aid is complex, and can be confusing and intimidating even for those who have a college education themselves. Those who may most need the assistance--lower-income individuals whose parents have lower educational attainment--are probably the least well-equipped to complete this process, and therefore will suffer compared to those with greater resources and experience to draw upon.

Despite the seniors' feeling that their parents support their going to college, high school personnel regard lack of parental encouragement as a significant barrier to participation in higher education. High school personnel may have been making an implicit reference to the inability of parents with no experience of higher education to provide help with the college application process, rather than implying that parents do not support the idea of higher education.

Teachers and high school counselors are not regarded by the seniors as highly influential on the college-going decision. Schools are, however, well rated for promoting college, disseminating information on financial aid and costs of education, and information on careers which require postsecondary training. One must bear in mind, however, that the seniors have no reference point from which to compare the adequacy and accuracy of the information they are receiving. The nontraditional students surveyed were a great deal less generous in their assessment of the information provided by their high schools on higher education and the skills needed in the labor market. Their subsequent experience in the labor market and at college affords them a perspective on the adequacy of the help they received in high school not available to seniors.

The majority of school personnel feel that they attempt to raise interest in higher education. Their responses suggest, however, that their attempts at higher education promotion may be directed at a select group of the student population. Educators appear to be segmenting their students according to whether they believe them capable of higher education. Students' perceptions of ability depend to a great extent on the feedback they receive from their teachers; if teachers do not acknowledge the potential in their students to succeed in college, seniors are less likely to feel themselves capable of doing so.

Only a small proportion of the seniors considered themselves to be of above-average intelligence; a quarter thought themselves not intelligent enough for college and a quarter felt that poor school grades would be a barrier. This apparent lack of self-esteem is an important barrier to higher education, although it may be more a matter of perceived inadequacies than actual inability. In general, however, the seniors feel educationally prepared for college.

It is possible that teachers' perceptions of the type of students going to college are out of date. A college education is no longer the preserve of a small intellectual elite; it is increasingly a requirement for success in many sectors of the labor market and therefore open to a much wider range of individuals.

High school personnel themselves feel that they are given insufficient information by area colleges on costs and financial aid; only a few feel that colleges provided enough information on entrance requirements and college expectations. Personnel, seniors, and their parents all have little faith in the effectiveness of college recruitment efforts.

The survey of nontraditional students affords a perspective on barriers that is not provided by the seniors; their responses confirm barriers identified both here and in prior research. Financial barriers remain of primary importance. Nontraditional students are less likely to have completed a college preparatory curriculum in high school and feel their educational preparation for college to be poor. After experience in the labor force, the nontraditional students are a great deal more critical of the help they received in school and the information they were given. However, they are also highly self-motivated to continue their education.

The barriers to educational access identified are remarkably consistent across all groups surveyed. Identifying the barriers to educational access is, however, only the beginning of the process of increasing educational access. Once a barrier is identified, the possibility exists to alleviate its effects. The barriers identified herein represent potential strategic points of intervention to increase equality of access. This report is therefore an important resource document for policy makers seeking effective ways to address a problem of great importance to the Ohio Appalachia region.

The increasingly complex society in the United States requires ever higher levels of knowledge and skill from its citizens, both in the labor force and in everyday life. Whether seen from a moral perspective on equality of opportunity or the functional necessity of an adequately educated labor force, the low rate of participation in higher education in Ohio Appalachia is therefore of great concern.

SECTION VII
PROJECT DIRECTOR'S CONCLUSIONS AND RECOMMENDATIONS

The preceding section of this report presents conclusions derived from research conducted for this project. Section VII presents related and additional conclusions made by the project director as a result of the research and personal observations. The conclusions are followed by recommendations which should be considered in future efforts to increase participation in higher education in Ohio Appalachia.

CONCLUSIONS

1. A serious problem has been identified: graduates of Ohio Appalachia's public schools participate in higher education at alarmingly low rates. Approximately 31 percent of Ohio Appalachian students pursue higher education, compared to 41 percent for Ohio and 62 percent nationwide. Although there exists no totally accurate method of determining the proportion of Ohio Appalachian residents who participate in higher education, the evidence overwhelmingly indicates that the participation rate for the region is extremely low. The participation rate has increased during the past five years, but the gap between Ohio Appalachia's rate and the state average has remained constant. The lack of postsecondary training will continue to impact negatively the quality of life for residents of the region and will inhibit economic development and recovery in the region.

2. Higher education is available in Ohio Appalachia. Ohio has made significant investments in making colleges and universities geographically accessible--residents of the region are within a one-hour drive of a college

or university. The region's public colleges and universities provide a variety of quality programs--residents can pursue almost any career goal at an institution within the region.

3. The proportion of Ohio Appalachia residents participating in higher education can be increased. There is a growing recognition of the need for postsecondary training throughout the region, but there exist both real and perceived barriers to fulfilling that need. If appropriate activities are implemented, the access rate can be improved; if actions are not taken, the region will continue to experience high poverty levels and outmigration of its youth.

4. There is no single, short-term solution for the education problems in Ohio Appalachia. Public colleges and universities, along with the Ohio Board of Regents and the state legislature, have implemented numerous programs designed to make higher education more accessible. Despite the diversity and quality of those programs, the access rate in Ohio Appalachia remains well below sufficient levels. Much of the work to be done will involve efforts to change perceptions regarding higher education and to establish postsecondary training as a high priority throughout the region.

5. Institutions of higher education are the most appropriate vehicle for initiating and facilitating access improvement efforts. These institutions cannot significantly impact regional access rates by single-institution efforts, but a collaborative approach can produce positive results. While each institution must remain autonomous in providing access programs appropriate to its constituency and its unique situation, there are certain actions that can be implemented uniformly throughout the region.

6. Access programs and activities cannot be conducted in isolation. Access programs will necessarily be intertwined with other problems--at-risk children, poverty, student achievement, economic development. While most activities will involve partnerships with public schools, regional programs should also involve those agencies that list education as a "fringe" item--Community Action Organization, Appalachian Regional Commission, Governor's Office of Appalachia.

7. State funding is necessary for initiating access activities that will impact the entire Ohio Appalachia region. Although there have been several state-funded programs directed to aiding specific population groups (minorities, females), Ohio Appalachia's general population is underrepresented in higher education. It is unlikely that, in a period of shrinking budgets, Ohio Appalachia colleges and universities can maintain current access programs, let alone initiate new efforts. The need to increase the proportion of Ohio Appalachia residents who participate in higher education must become a higher priority at the state level before coordinated access efforts can become a reality. An inventory of access programs at Ohio Appalachia colleges and universities indicates that there are numerous effective and innovative programs in existence and that those programs utilize varied sources of funding--federal, state, private, and institutional. (See appendix VI for program samples.) Unfortunately, many of those programs lack consistent funding, operate in relative isolation, and cannot impact the entire region.

RECOMMENDATIONS

The recommendations which follow are general in nature and are intended to provide a starting point for future efforts to improve educational attainment in Ohio Appalachia. The recommendations do not provide a definitive solution for the access problem because there is no simple solution. Solving it will require considerable time, effort, and collaboration, as well as, the involvement of colleges and universities, the Ohio Board of Regents, the state legislature, and local schools. The ultimate responsibility for solving the problem, however, falls to the residents of Ohio Appalachia. State government and the Ohio Board of Regents can provide facilities, programs, and financial assistance; colleges and universities can provide postsecondary training and information; schools can provide preparatory programs and enrollment assistance. It is the residents, however, who must decide whether higher education is worthwhile in their individual lives and in their region.

1. Develop a formal commitment to increase the proportion of Ohio Appalachia residents participating in higher education. The driving force behind any effort to increase access rates will be the public schools and institutions of higher education. The initial step of a plan to increase access to higher education should be to assure that the governing bodies of schools and colleges recognize the need for action and that they support the efforts of their institutions. Without support from their governing bodies, educational institutions are unlikely to address the access problem with any urgency. With support from those governing bodies, accessing higher education will become a higher priority in the education community.

It is recommended that governing bodies of schools and colleges adopt a resolution supporting efforts to increase the educational attainment of residents of Ohio's Appalachian region.

2. Develop a collaborative approach to improving access rates in Ohio's Appalachian region. One conclusion derived from this project is that public colleges and universities can best serve as the lead agencies in developing and implementing actions that will increase participation in higher education. One observation from this project is that the colleges and universities can best serve the region if they maintain a unified approach. It is recommended that the present consortium remain intact for the purpose of implementing access activities throughout the region. While much of the work involved in improving access rates in Ohio Appalachia can be more efficiently accomplished with a uniform, regionwide approach, it must be recognized that each participating institution must retain its autonomy in order to develop and conduct access activities that are relevant to its constituency, its staff, and its mission.

3. The consortium of public colleges and universities should establish the "Appalachian Center for Higher Education." Recognizing that there is no single, quick solution for increasing Ohio Appalachia residents' participation in higher education, there is a need for a unifying organization to coordinate ongoing access activities in the region. The Center could facilitate access activities that are common to the entire region and could serve as a central source of data regarding the educational, economic, and demographic conditions of the region.

An Appalachian Center for Higher Education would be the vehicle from which access improvement activities could evolve, and would be essential in assuring that access efforts be ongoing. Recognizing the need for a collaborative effort in addressing the access problem--as opposed to isolated efforts by individual institutions--it is essential that the center be established with modest but adequate state funding.

4. Higher education institutions should develop and implement a campaign designed to inform residents of Ohio's Appalachian counties of the need to increase the region's level of educational attainment. The purpose of this awareness campaign would be to focus attention on the access problem and to inform residents that improving access rates is essential to economic development. The campaign should utilize a variety of forums--parent groups, school groups, church groups, chambers of commerce, and other similar organizations. The campaign should be sponsored by higher education, rather than by individual colleges or universities, and should use data from this document to illustrate the current levels of educational attainment in the region and the need for improvement. Campaign presentations should emphasize the quality of colleges and universities in the region and the efforts those institutions make to improve access rates.

   Presentations should represent the entire consortium of Ohio Appalachia institutions and should be structured to relate to economic recovery issues. News media involvement during this awareness campaign will be valuable in establishing that colleges and universities are intensely involved in efforts to improve the region's economic future.

5. Higher education should develop and implement a program that would enable public school personnel to improve the promotion of higher education to students and parents.

Teachers should be provided inservice training regarding the emerging need for highly trained workers, the need for more Ohio Appalachians to pursue postsecondary training, and the types of occupations needed in the region. This inservice program should emphasize that dissemination of college information and occupational outlook must go beyond the top quartile of students who traditionally consider college attendance. Teachers must be made aware that the second and third quartiles of their students must give serious consideration to postsecondary training.

Teachers should also be provided inservice training regarding college opportunities in Ohio Appalachia, along with information relevant to academic requirements, admission procedures, and financial requirements. It should be a primary objective to assure that teachers are fully aware of the quality educational programs offered by colleges and universities in the region.

While this recommendation refers to teachers, it is not intended to exclude school counselors. Counselors are vitally important in the process of preparing students for college, but they cannot provide the services necessary for increasing participation rates. Counselors should remain the contact person for representatives from institutions of higher education, but it should be understood that teachers must be considered as an integral part of the counseling process.

6. The use of community resources in promoting higher education should be further developed. Community groups, businesses, and individuals can be very valuable in encouraging Ohio Appalachia residents to pursue postsecondary training. A part of the awareness campaign described in recommendation 4 should include activities that would involve various segments of local communities:

SCHOLARSHIPS. Funding and sponsorship of local scholarships could be established/expanded by numerous sources: Alumni, civic, and faculty groups, professional organizations, individuals, etc. Although local scholarships exist throughout the region, there is a need to increase the number and amount. The scholarships, ranging from "seed" amounts to full tuition and fees, would not only provide financial aid to students but also exhibit that communities place high value on postsecondary training. A consortium of colleges/universities should assist communities throughout the region to establish or expand local scholarships.

FOUNDATION. In addition to establishing/expanding local scholarships throughout Ohio Appalachia, there should be an attempt to establish a foundation fund that would provide financial aid to residents pursuing postsecondary training. While it should be a long-term goal to develop a foundation that could serve the entire 29-county region, it would be practical to begin a pilot project in one community or county. The purpose of the foundation would be to provide assurance to residents that postsecondary training will be financially attainable. The foundation should be initiated/sponsored by the consortium of colleges and universities, and the consortium should be committed to developing advising and counseling services along with financial aid.

MENTORS. Colleges/universities should increase the use of current college students returning to their communities and schools to promote higher education. The college students could provide information regarding college costs, academic preparation, and admission procedures. Graduates of Ohio Appalachia colleges who are currently employed should also be used to provide encouragement to potential students.

CHURCHES. A consortium of colleges/universities should develop a procedure for providing access information to churches throughout the region. Existing associations of clergy should be used to make presentations regarding the need for improved access. Church officials could be valuable in reaching parents of potential college students, and churches could serve as a point of distribution for financial aid information.

7. Colleges and universities should direct more access and recruitment efforts toward parents. Survey results indicate that parents are overwhelmingly the most influential group in the decision whether or not to attend college; therefore, parents need to be fully informed regarding their children's postsecondary options. Ideally, parents would receive information relevant to higher education while their children are in early elementary grades, which would help establish high aspirations and expectations for children early in their academic preparation.

Although communicating with the general parent population presents a major problem, there are existing mechanisms that can be used effectively: school-sponsored parent meetings, parent-teacher conferences, churches, school district newsletters. Personal contact with parents should be the preferred method of contact, but printed material promoting higher education should be used as an alternative or supplement.

8. Colleges and universities in Ohio Appalachia need to intensify efforts to develop electronic communications among themselves and with schools in the region. While some progress has been made in establishing a linkage process, much is yet to be accomplished. Electronic linkage between schools and colleges could be productive in accessing financial aid information, program requirements, admission procedures, etc. Electronic linkage would also be useful in developing a student tracking system.

9. A consortium of public colleges and universities needs to continue, and intensify, efforts to persuade Ohio government to make higher education financially accessible for Ohio Appalachia residents. This project revealed that lack of finances is the greatest barrier to participating in higher education and that tuition and fees at Ohio's public colleges and universities are among the highest in the nation. The high student cost for college had more negative impact in Ohio Appalachia, where the ability to pay college expenses is restricted by low family income. The national trend of more reliance on loans, rather than grants, will also negatively impact the region. Even with a college degree, Ohio Appalachians have little prospect for high-paying jobs in the region; therefore, they realize that they may not have the ability to repay loans.

10. Higher education needs to develop and implement programs designed to eliminate misconceptions among Ohio Appalachia residents. Some barriers to participating in higher education, according to project findings, are perceived rather than real barriers.

A significant portion of Ohio Appalachians perceive that college costs are greater than they really are. A part of any presentation associated with other project recommendations should be an explanation of actual college costs. Information regarding college costs must be directed not only toward prospective students, but also toward parents and school personnel.

Survey results indicate that significant numbers of Ohio Appalachia high school seniors feel they may not be intelligent enough for college or they may not "fit in" at college. Institutions of higher education need to collaborate with schools to develop/improve programs designed to build the self-image of the region's youth.

APPENDIX I
CONSORTIUM MEMBERS

Belmont Technical College
Dr. Wes Channell, President

Hocking College
Dr. John Light, President

Jefferson Technical College
Dr. Ed Florak, President

Kent State University (Salem)
Dr. James Cooney, Dean

Muskingum Area Technical College
Dr. Lynn Willett, President

Ohio University
Dr. James Bryant, Vice Provost

Shawnee State University
Dr. Clive Veri, President

Southern State Community College
Dr. George McCormick, President

University of Rio Grande
Dr. Barry Dorsey, President

Washington State Community College
Dr. Carson Miller, President

APPALACHIAN ACCESS SURVEY RESULTS

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val%	n	val%	n	val%	n	val%
Sample size:	1,553	100.0	422	100.0	265	100.0	164	100.0
Sex (of respondent):								
male	761	49.3	91	21.9	-	-	52	31.9
female	782	50.7	325	78.1	-	-	111	68.1
no response/invalid	(10)	-	(6)	-	-	-	(1)	-
Total valid	1543	100.0	416	100.0	-	-	163	100.0
Race:								
white	1502	97.3	408	97.1	-	-	157	95.7
black	20	1.3	9	2.1	-	-	4	2.5
american indian/eskimo	9	0.6	2	0.5	-	-	2	1.2
hispanic	4	0.3	0	0	-	-	0	0
asian/pacific islander	8	0.5	1	0.2	-	-	1	0.6
no response/invalid	(10)	-	(2)	-	-	-	0	-
Total valid	1543	100.0	420	100.0	-	-	164	100.0
Natural parents you reside with:								
one	429	27.9	-	-	-	-	-	-
two	1028	66.8	-	-	-	-	-	-
none	83	5.4	-	-	-	-	-	-
no response/invalid	(13)	-	-	-	-	-	-	-
Total valid	1540	100.0	-	-	-	-	-	-
Parents/your marital status:								
married	1058	68.2	349	82.7	-	-	95	57.9
divorced	365	23.5	49	11.6	-	-	41	25.0
separated	23	1.5	12	2.8	-	-	9	5.5
never married	24	1.5	0	0	-	-	17	10.4
one/both deceased	63	4.1	-	-	-	-	-	-
widowed	-	-	12	2.8	-	-	2	1.2
no response/invalid	(20)	-	0	-	-	-	-	-
Total valid	1533	100.0	422	100.0	-	-	164	100.0

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APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Siblings:								
none	124	8.0	37	8.8	-	-	-	-
one-two	1015	65.6	281	66.6	-	-	-	-
three-four	295	19.0	82	19.4	-	-	-	-
five-nine	110	7.1	20	4.7	-	-	-	-
ten or more	4	0.3	2	0.5	-	-	-	-
no response/invalid	(5)	-	-	-	-	-	-	-
Total valid	1548	100.0	422	100.0	-	-	-	-
Family's income:								
< $21,959	291	27.1	94	28.0	-	-	-	-
$21,959-38,868	353	32.8	124	36.9	-	-	-	-
$38,869-63,793	325	30.2	99	29.5	-	-	-	-
> $63,794	106	9.9	19	5.7	-	-	-	-
no response/invalid	(478)	-	(86)	-	-	-	-	-
Total valid	1075	100.0	336	100.0	-	-	-	-
Receive welfare/pub assistance:								
yes	190	12.4	56	13.6	-	-	-	-
no	1284	83.8	353	85.5	-	-	-	-
unsure	59	3.8	4	0.9	-	-	-	-
no response/invalid	(20)	-	(9)	-	-	-	-	-
Total valid	1533	100.0	413	100.0	-	-	-	-
Want to live in area most of life:								
yes	206	13.3	81	19.4	-	-	83	50.6
no	896	57.9	171	41.0	-	-	31	18.9
unsure	445	28.8	165	39.6	-	-	50	30.5
no response/invalid	(6)	-	(5)	-	-	-	0	-
Total valid	1547	100.0	417	100.0	-	-	164	100.0

APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Think will live in area most of life:								
yes	212	13.7	86	20.6	-	-	80	48.8
no	787	50.8	172	41.3	-	-	32	19.5
unsure	549	35.5	159	38.1	-	-	52	31.7
no response/invalid	(5)	-	(5)	-	-	-	0	-
Total valid	1548	100.0	417	100.0	-	-	164	100.0
High School GPA:								
3.5-4.0 (B+/A)	284	18.5	89	21.9	-	-	13	8.2
3.0-3.4 (B)	424	27.6	131	32.4	-	-	57	36.1
2.5-2.9 (C+)	418	27.2	99	24.4	-	-	48	30.4
2.0-2.4 (C)	334	21.8	67	16.5	-	-	32	20.3
1.5-1.9 (D+)	47	3.1	14	3.5	-	-	6	3.7
1.0-1.4 (D)	22	1.4	4	1.0	-	-	2	1.3
0-1.0 (F)	5	0.3	1	0.3	-	-	0	0
no response/invalid	(19)	-	(17)	-	-	-	(6)	-
Total valid	1534	100.0	405	100.0	-	-	158	100.0
Occupation requires training beyond high school:								
yes	1327	87.0	349	88.1	-	-	-	-
no	65	4.3	15	3.8	-	-	-	-
unsure	133	8.7	32	8.1	-	-	-	-
no response/invalid	(28)	-	(26)	-	-	-	-	-
Total valid	1525	100.0	396	100.0	-	-	-	-

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APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Siblings attending/ed college:								
none	960	66.0	259	61.4	-	-	79	50.0
one	359	24.7	105	24.9	-	-	45	28.5
two	105	7.2	45	10.7	-	-	24	15.2
three	20	1.4	9	2.1	-	-	5	3.2
four	4	0.3	3	0.7	-	-	2	1.3
five	1	0.1	0	0	-	-	1	0.6
six or more	5	0.3	1	0.2	-	-	2	1.3
no response/invalid	(99)	-	0	-	-	-	(6)	-
Total valid	1454	100.0	422	100.0	-	-	158	100.0
Highest school grade completed by **father/parent answering survey:**								
< 8th grade	13	0.8	4	1.0	-	-	16	9.9
8th grade	43	2.8	4	1.0	-	-	18	11.2
9th grade	26	1.7	9	2.2	-	-	11	6.8
10th grade	38	2.5	11	2.6	-	-	7	4.3
11th grade	71	4.6	13	3.1	-	-	7	4.3
12th grade	733	47.9	221	52.7	-	-	73	45.3
1-3 yrs college	180	11.8	69	16.5	-	-	14	8.7
grad 2yr college	72	4.7	27	6.4	-	-	1	0.6
grad 4yr college	112	7.3	40	9.5	-	-	1	0.6
advanced degree	75	4.9	21	5.0	-	-	2	1.2
don't know	167	10.9	-	-	-	-	11	6.8
missing	(23)	-	(3)	-	-	-	(3)	-
Total valid	1530	100.0	419	100.0	-	-	161	100.0

APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Highest school grade completed by mother/spouse of respondent:								
< 8th grade	4	0.3	4	1.0	-	-	9	6
8th grade	19	1.2	13	3.3	-	-	12	7.4
9th grade	24	1.6	9	2.3	-	-	7	4.3
10th grade	54	3.5	12	3.0	-	-	13	8.0
11th grade	67	4.3	18	4.6	-	-	11	6.8
12th grade	771	50.4	199	50.6	-	-	88	54.3
1-3 yrs college	188	12.3	69	17.6	-	-	8	4.9
grad 2yr college	108	7.1	28	7.1	-	-	6	3.7
grad 4yr college	131	8.6	24	6.1	-	-	0	0
advanced degree	52	3.4	17	4.3	-	-	0	0
don't know	111	7.3	-	-	-	-	8	4.9
no response/invalid	(24)	-	(29)	-	-	-	(2)	-
Total valid	1529	100.0	393	100.0	-	-	162	100.0
Rank your intelligence:								
above average	447	29.0	-	-	-	-	-	-
average	1075	69.9	-	-	-	-	-	-
below average	17	1.1	-	-	-	-	-	-
no response/invalid	(14)	-	-	-	-	-	-	-
Total valid	1539	100.0	-	-	-	-	-	-
Plans 1 year after high school:								
4yr college	698	45.3	223	54.3	-	-	19	15.2
2yr college	310	20.1	81	19.7	-	-	7	5.6
military	133	8.6	26	6.3	-	-	8	6.4
employment	195	12.7	32	7.8	-	-	91	72.8
no response/invalid	(217)	-	(13)	-	-	-	(39)	-
Total valid	1336	100.0	409	100.0	-	-	125	100.0
Educationally prepared for college:								
yes	889	57.7	279	67.4	-	-	73	44.5
no	235	15.3	48	11.6	-	-	68	41.5
unsure	416	27.0	87	21.0	-	-	23	14.0
no response/invalid	(13)	-	(8)	-	-	-	0	-
Total valid	1540	100.0	414	100.0	-	-	164	100.0

APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Want to attend college:								
yes	1241	80.0	347	82.6	-	-	-	-
no	151	9.7	33	7.9	-	-	-	-
unsure	159	10.3	40	9.5	-	-	-	-
no response/invalid	(2)	-	(2)	-	-	-	-	-
Total valid	1551	100.0	420	100.0	-	-	-	-
Either of two best friends going to college:								
yes	1307	84.4	-	-	-	-	-	-
no	116	7.5	-	-	-	-	-	-
unsure	126	8.1	-	-	-	-	-	-
no response/invalid	(4)	-	-	-	-	-	-	-
Total valid	1549	100.0	-	-	-	-	-	-
Can you afford college?								
yes	544	35.3	135	32.9	-	-	-	-
no	514	33.4	158	38.4	-	-	-	-
unsure	481	31.3	118	28.7	-	-	-	-
no response/invalid	(14)	-	(11)	-	-	-	-	-
Total valid	1539	100.0	411	100.0	-	-	-	-
Visited college in last two yrs:								
yes	1096	70.7	290	69.2	-	-	-	-
no	454	29.3	117	27.9	-	-	-	-
no response/invalid	(3)	-	(15)	-	-	-	-	-
Total valid	1550	100.0	407	100.0	-	-	-	-
Need for college to attain financial security:								
yes	968	62.9	315	75.9	-	-	-	-
no	296	19.2	44	10.6	-	-	-	-
unsure	275	17.9	56	13.5	-	-	-	-
no response/invalid	(14)	-	(7)	-	-	-	-	-
Total valid	1539	100.0	415	100.0	-	-	-	-

APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Your high school curriculum:								
general	881	57.1	76	18.1	-	-	50	30.5
college preparatory	376	24.3	290	69.1	-	-	82	50.0
vocational	163	10.6	30	7.1	-	-	30	18.3
combination	124	8.0	24	5.7	-	-	2	1.2
no response/invalid	(9)	-	(2)	-	-	-	0	-
Total valid	1544	100.0	420	100.0	-	-	164	100.0
When will you begin college?								
w/in 1 year of high school	1030	66.6	318	76.3	-	-	-	-
not sure	258	16.7	49	11.8	-	-	-	-
after military	89	5.8	14	3.4	-	-	-	-
after working 1-5yrs	53	3.4	6	1.4	-	-	-	-
no plans to attend	116	7.5	30	7.2	-	-	-	-
no response/invalid	(7)	-	(5)	-	-	-	-	-
Total valid	1546	100.0	417	100.0	-	-	-	-
Live w/parents after high school:								
yes	692	44.8	206	49.5	-	-	-	-
no	582	37.6	103	24.8	-	-	-	-
unsure	272	17.6	107	25.7	-	-	-	-
no response/invalid	(7)	-	(6)	-	-	-	-	-
Total valid	1546	100.0	416	100.0	-	-	-	-
Parents want you to attend college:								
yes	1287	83.4	384	91.9	-	-	-	-
no	58	3.8	7	1.7	-	-	-	-
unsure	199	12.9	27	6.4	-	-	-	-
no response/invalid	(9)	-	(4)	-	-	-	-	-
Total valid	1544	100.0	418	100.0	-	-	-	-

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APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Kind of job high school does to encourage higher education:								
good	663	42.87	155	38.1	174	65.9	26	15.9
fair	679	43.9	163	40.0	76	28.8	66	40.2
poor	148	9.6	43	10.6	10	3.8	61	37.2
unsure	58	3.7	46	11.3	4	1.5	11	6.7
no response/invalid	(5)	-	(15)	-	(1)	-	0	-
Total valid	1548	100.0	407	100.0	264	100.0	164	100.0
Kind of job college does to encourage higher education:								
good	621	40.2	182	44.2	114	43.3	56	34.1
fair	622	40.3	142	34.5	109	41.4	57	34.8
poor	130	8.4	24	5.8	26	9.9	26	15.9
unsure	171	11.1	64	15.5	14	5.3	25	15.2
no response/invalid	(9)	-	(10)	-	(2)	-	0	-
Total valid	1544	100.0	412	100.0	263	100.0	164	100.0
Does high school provide sufficient info on fin aid/costs?								18.6
yes	1083	70.2	206	50.4	191	72.6	30	52.2
no	289	18.7	101	24.7	16	6.1	84	29.2
unsure	170	11.1	102	24.9	56	21.3	47	-
no response/invalid	(11)	-	(13)	-	(2)	-	(3)	100.07
Total valid	1542	100.0	409	100.0	263	100.0	161	
Does high school provide sufficient info on careers requiring training?								
yes	917	59.5	171	42.1	149	57.3	37	22.6
no	407	26.4	111	27.3	46	17.7	87	53.0
unsure	217	14.1	124	30.6	65	25.0	40	24.4
no response/invalid	(12)	-	(16)	-	(5)	-	0	-
Total valid	1541	100.0	406	100.0	260	100.0	164	100.0

APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
School/area college promotes college attendance:								
yes	1023	66.5	257	63.3	136	52.5	-	-
no	101	6.6	33	8.1	32	12.4	-	-
unsure	415	26.9	116	28.6	91	35.1	-	-
no response/invalid	(14)	-	(16)	-	(6)	-	-	-
Total valid	1539	100.0	406	100.0	259	100.0	-	-
RANK THOSE MOST INFLUENTIAL ON YOUR DECISION TO ATTEND COLLEGE:								
Influence of peers/friends:								
valid cases	1010	65.0	-	-	197	74.3	65	39.6
mean ranking	2.4	-	-	-	2.2	-	2.2	-
median ranking	2.0	-	-	-	2.0	-	2.0	-
Influence of parents:								
valid cases	1337	86.1	-	-	252	95.1	79	48.2
mean ranking	1.7	-	-	-	1.5	-	2.2	-
median ranking	1.0	-	-	-	1.0	-	2.0	-
Influence of brother/sister:								
valid cases	414	26.7	-	-	56	21.1	41	25.0
mean ranking	2.5	-	-	-	2.6	-	2.5	-
median ranking	2.0	-	-	-	3.0	-	2.0	-
Influence of other relatives:								
valid cases	461	29.7	-	-	23	8.7	50	30.5
mean ranking	2.7	-	-	-	2.9	-	2.3	-
median ranking	3.0	-	-	-	3.0	-	2.0	-
Influence of teachers:								
valid cases	597	38.4	-	-	192	72.5	30	18.3
mean ranking	2.6	-	-	-	2.4	-	2.5	-
median ranking	3.0	-	-	-	2.0	-	3.0	-
Influence of counselor:								
valid cases	327	21.1	-	-	68	25.7	39	23.8
mean ranking	2.8	-	-	-	2.9	-	2.2	-
median ranking	3.0	-	-	-	3.0	-	3.0	-

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APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Influence of college reps:								
valid cases	169	10.9	-	-	12	4.5	28	17.0
mean ranking	3.1	-	-	-	3.4	-	2.6	-
median ranking	3.0	-	-	-	3.5	-	3.0	-
Influence of employer:								
valid cases	132	8.5	-	-	16	6.0	34	20.7
mean ranking	3.2	-	-	-	3.2	-	2.3	-
median ranking	3.0	-	-	-	3.0	-	2.0	-
Specified other influences:								
valid cases	319	20.5	-	-	7	2.6	91	55.5
mean ranking	1.9	-	-	-	-	-	1.5	-
median ranking	1.0	-	-	-	-	-	1.0	-
Parents encouraged higher education:								
yes	1372	89.3	401	96.4	-	-	69	42.1
no	113	7.3	15	3.6	-	-	87	53.0
unsure	52	3.4	-	-	-	-	8	4.9
no response/invalid	(16)	-	(6)	-	-	-	0	-
Total valid	1537	100.0	416	100.0	-	-	164	100.0
Plan to/are attend/ing college...								
full-time	1019	67.1	304	76.4	-	-	128	78.0
part-time	350	23.0	56	14.1	-	-	36	22.0
not at all	150	9.7	38	9.5	-	-	-	-
no response/invalid	(34)	-	(24)	-	-	-	0	-
Total valid	1519	100.0	398	100.0	-	-	164	100.0
Where will you attend college?								
not attending	124	8.1	37	9.6	-	-	-	-
unsure	327	21.3	-	-	-	-	-	-
local w/in 50 miles	427	27.9	154	40.1	-	-	-	-
in Ohio 50+ miles	473	30.9	136	35.4	-	-	-	-
out of state	175	11.4	52	13.6	-	-	-	-
abroad	7	0.5	5	1.3	-	-	-	-
no response/invalid	(20)	-	(38)	-	-	-	-	-
Total valid	1533	100.0	384	100.0				

APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
First discussed college with parents...								
grades 1-6	156	10.1	135	32.9	-	-	-	-
grades 7-8	279	18.1	88	21.4	-	-	-	-
grades 9-10	585	37.9	127	30.9	-	-	-	-
grades 11-12	416	27.0	47	11.4	-	-	-	-
never discussed	107	6.9	14	3.4	-	-	-	-
no response/invalid	(10)	-	(11)	-	-	-	-	-
Total valid	1543	100.0	411	100.0				
Have parents saved $ for college?								
unsure	761	49.9	-	-	-	-	29	17.8
can't save	406	26.7	246	62.6	-	-	125	76.7
saved 1-2 yrs	122	8.0	61	15.5	-	-	2	1.2
saved 3-5 yrs	50	3.3	27	6.9	-	-	2	1.2
saved 5+ yrs	184	12.1	59	15.0	-	-	5	3.1
no response/invalid	(30)	-	(29)	-	-	-	(1)	-
Total valid	1523	100.0	393	100.0	-	-	163	100.0
When did you decide your career?								
grades 1-6	72	4.7	-	-	-	-	5	3.1
grades 7-8	114	7.4	-	-	-	-	5	3.1
grades 9-10	385	24.9	-	-	-	-	7	4.3
grades 11-12	669	43.2	-	-	-	-	8	4.9
still undecided	307	19.8	-	-	-	-	22	13.6
no response/invalid	(6)	-	-	-	-	-	(2)	-
after graduating HS	-	-	-	-	-	-	115	71.0
Total valid	1547	100.0	-	-	-	-	162	100.0
Years it will take to reach goal:								
unsure	289	18.7	-	-	-	-	13	7.9
< 1 yr	88	5.7	-	-	-	-	13	7.9
2-3 yrs	379	24.5	-	-	-	-	90	54.9
3-5 yrs	541	35.0	-	-	-	-	37	22.6
> 5 yrs	249	16.1	-	-	-	-	11	6.7
no response/invalid	(7)	-	-	-	-	-	0	-
Total valid	1546	100.0	-	-	-	-	164	100.0

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APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Planning to marry...								
no plans	779	50.6	-	-	-	-	-	-
< 1 yr	74	4.8	-	-	-	-	-	-
1-2 yrs	163	10.6	-	-	-	-	-	-
3-5 yrs	497	32.3	-	-	-	-	-	-
already married	27	1.7	-	-	-	-	-	-
no response/invalid	13	-	-	-	-	-	-	-
Total valid	1540	100.0	-	-	-	-	-	-
Est. cost for 1 yr of 4 yr college:								
< $1,000	7	0.6	-	-	-	-	-	-
$1-4,999	147	11.9	24	5.7	-	-	-	-
$5-9,999	482	39.1	142	33.6	-	-	-	-
$10-14,999	341	27.7	94	22.3	-	-	-	-
$15-19,999	154	12.5	34	8.1	-	-	-	-
$20-29,999	54	4.4	18	4.3	-	-	-	-
> $30,000	47	3.8	110	26.1	-	-	-	-
no response/invalid	(321)	0	0	-	-	-	-	-
Total valid	1232	100.0	422	100.0	-	-	-	-
Est. cost 1 yr of 2 yr college:								
< $2,000	134	11.5	22	5.2	-	-	-	-
$2-3,999	407	34.9	111	26.3	-	-	-	-
$4-5,999	238	20.4	78	18.5	-	-	-	-
$6-7,999	136	11.6	31	7.3	-	-	-	-
$8-9,999	86	7.4	11	2.6	-	-	-	-
> $10,000	166	14.2	169	40.1	-	-	-	-
no response/invalid	(386)	-	0	-	-	-	-	-
Total valid	1167	100.0	422	100.0	-	-	-	-

APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Made aware of college at HS...								
grades 1-3	75	4.9	-	-	-	-	-	-
grades 4-6	159	10.3	-	-	-	-	-	-
grades 7-8	403	26.2	-	-	-	-	-	-
grades 9-10	595	38.7	-	-	-	-	-	-
grades 11-12	135	8.8	-	-	-	-	-	-
unsure	172	11.2	-	-	-	-	-	-
no response/invalid	(14)	-	-	-	-	-	-	-
Total valid	1539	100.0	-	-	-	-	-	-
Local college programs influenced decision to go to college:								
yes	598	39.2	-	-	-	-	80	49.1
no	730	47.8	-	-	-	-	77	47.2
unsure	198	13.0	-	-	-	-	6	3.7
no response/invalid	(27)	-	-	-	-	-	(1)	-
Total valid	1526	100.0		-	-	-	163	100.0
MAJOR PROBLEMS REGARDING COLLEGE:								
Lack info on college ed programs:								
valid cases	519	33.4	160	37.9	19	7.2	49	29.9
mean ranking	2.3	-	-	-	2.4	-	2.2	-
median ranking	2.0	-	2.0	-	2.0	-	2.0	-
Want an immediate income:								
valid cases	495	31.9	139	32.9	75	28.3	-	-
mean ranking	2.4	-	-	-	2.3	-	-	-
median ranking	2.0	-	3.0	-	2.0	-	-	-
No friends/peers attend college:								
valid cases	168	10.8	50	11.8	51	19.2	13	7.9
mean ranking	2.9	-	-	-	2.6	-	2.7	-
median ranking	3.0	-	3.0	-	3.0	-	3.0	-

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APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
College too far away:								
valid cases	228	14.7	75	17.7	11	4.2	23	14.0
mean ranking	2.7	-	-	-	3.3	-	2.6	-
median ranking	3.0	-	3.0	-	4.0	-	3.0	-
Lack of parental support:								
valid cases	161	10.4	28	6.6	145	54.7	15	9.1
mean ranking	2.8	-	-	-	2.1	-	3.0	-
median ranking	3.0	-	4.0	-	2.0	-	3.0	-
Lack of financial aid info:								
valid cases	591	38.1	154	36.5	26	9.8	82	50.0
mean ranking	2.3	-	-	-	2.3	-	1.9	-
median ranking	2.0	-	2.0	-	2.0	-	2.0	-
Won't fit in:								
valid cases	211	13.6	38	9.0	-	-	-	-
mean ranking	2.8	-	-	-	-	-	-	-
median ranking	3.0	-	4.0	-	-	-	-	-
Not smart enough/lack of ability:								
valid cases	401	25.8	56	13.3	25	9.4	33	20.1
mean ranking	2.4	-	-	-	2.6	-	2.5	-
median ranking	2.0	-	3.0	-	3.0	-	3.0	-
Poor grades in school:								
valid cases	418	26.9	82	19.4	62	23.4	41	25.0
mean ranking	2.3	-	-	-	2.4	-	1.8	-
median ranking	2.0	-	3.0	-	2.5	-	2.0	-
Dislike of school:								
valid cases	328	21.1	78	18.5	-	-	-	-
mean ranking	2.4	-	-	-	-	-	-	-
median ranking	2.0	-	2.0	-	-	-	-	-

APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Lack of finances:								
valid cases	900	5.8	273	64.7	166	62.6	120	73.1
mean ranking	1.7	-	-	-	1.8	-	1.8	-
median ranking	1.0	-	1.0	-	1.0	-	2.0	-
Poor self-image:								
valid cases	-	-	-	-	72	27.2	66	40.2
mean ranking	-	-	-	-	2.3	-	2.3	-
median ranking	-	-	-	-	2.0	-	2.0	-
Don't see need for college:								
valid cases	-	-	-	-	115	43.4	-	-
mean ranking	-	-	-	-	2.3	-	-	-
median ranking	-	-	-	-	2.0	-	-	-
MOST IMPORTANT FACTORS IN SELECTING A COLLEGE:								
Financial aid availability:								
valid cases	928	59.8	268	63.5	-	-	101	61.6
mean ranking	2.0	-	-	-	-	-	1.7	-
median ranking	2.0	-	2.0	-	-	-	1.0	-
College reputation:								
valid cases	579	37.3	177	41.9	-	-	71	43.3
mean ranking	2.3	-	-	-	-	-	2.4	-
median ranking	2.0	-	3.0	-	-	-	2.0	-
Friends/relatives attending:								
valid cases	231	14.9	48	11.4	-	-	21	12.8
mean ranking	2.7	-	-	-	-	-	2.8	-
median ranking	3.0	-	3.0	-	-	-	3.0	-
Not planning to attend:								
valid cases	127	8.2	41	9.7	-	-	-	-
mean ranking	3.1	-	-	-	-	-	-	-
median ranking	4.0	-	4.0	-	-	-	-	-

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APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Location:								
valid cases	918	59.1	255	60.4	-	-	115	70.1
mean ranking	2.4	-	-	-	-	-	2.1	-
median ranking	2.0	-	2.0	-	-	-	2.0	-
Programs offered:								
valid cases	1191	76.7	300	71.1	-	-	133	81.1
mean ranking	1.9	-	-	-	-	-	1.8	-
median ranking	2.0	-	2.0	-	-	-	2.0	-
Size of college:								
valid cases	528	34.0	110	26.1	-	-	86	27.0
mean ranking	2.6	-	-	-	-	-	2.4	-
median ranking	3.0	-	3.0	-	-	-	3.0	-
Area colleges provide HS with sufficient info on costs/fin aid?								
yes	-	-	-	-	123	47.1	-	-
no	-	-	-	-	29	11.1	-	-
unsure	-	-	-	-	109	41.8	-	-
no response/invalid	-	-	-	-	(4)	-	-	-
Total valid	-	-	-	-	261	100.0	-	-
Area colleges provide HS with sufficient info on college requirements/expectations?								
yes	-	-	-	-	104	39.8	-	-
no	-	-	-	-	59	22.6	-	-
unsure	-	-	-	-	98	37.5	-	-
no response/invalid	-	-	-	-	(4)	-	-	-
Total valid	-	-	-	-	261	100.0	-	-

APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Percentage of students prepared for higher education:								
mean	-	-	-	-	44.9	-	-	-
median	-	-	-	-	40.0	-	-	-
no response/invalid	-	-	-	-	0	-	-	-
Total valid	-	-	-	-	265	100.0	-	-
Percentage of parents who encourage higher education:								
mean	-	-	-	-	40.1	-	-	-
median	-	-	-	-	30.0	-	-	-
no response/invalid	-	-	-	-	0	-	-	-
Total valid	-	-	-	-	265	100.0	-	-
Percentage of students influenced by college recruitment:								
mean	-	-	-	-	26.9	-	-	-
median	-	-	-	-	10.0	-	-	-
no response/invalid	-	-	-	-	(2)	-	-	-
Total valid	-	-	-	-	263	100.0	-	-
Percentage of students able to succeed in college:								
mean	-	-	-	-	51.7	-	-	-
median	-	-	-	-	50.0	-	-	-
no response/invalid	-	-	-	-	0	-	-	-
Total valid	-	-	-	-	265	100.0	-	-
Percentage of time spent informing students about HE:								
mean	-	-	-	-	22.7	-	-	-
median	-	-	-	-	10.0	-	-	-
no response/invalid	-	-	-	-	(2)	-	-	-
Total valid	-	-	-	-	263	100.0	-	-

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APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Percentage of students who should pursue higher education:								
mean	-	-	-	-	57.7	-	-	-
median	-	-	-	-	60.0	-	-	-
no response/invalid	-	-	-	-	0	-	-	-
Total valid	-	-	-	-	265	-	-	-
Is it your responsibility to encourage students to pursue HE?								
yes	-	-	-	-	241	91.6	-	-
no	-	-	-	-	11	4.2	-	-
unsure	-	-	-	-	11	4.2	-	-
no response/invalid	-	-	-	-	(2)	-	-	-
Total valid	-	-	-	-	263	100.0	-	-
Does your attitude influence students to pursue HE?								
yes	-	-	-	-	230	87.8	-	-
no	-	-	-	-	8	3.1	-	-
unsure	-	-	-	-	24	9.2	-	-
no response/invalid	-	-	-	-	(3)	-	-	-
Total valid	-	-	-	-	262	100.0	-	-
Do you attempt to raise student interest in HE?								
yes	-	-	-	-	253	96.9	-	-
no	-	-	-	-	2	0.8	-	-
unsure	-	-	-	-	6	2.3	-	-
no response/invalid	-	-	-	-	(4)	-	-	-
Total valid	-	-	-	-	261	100.0	-	-

APPALACHIAN ACCESS SURVEY RESULTS (cont.)

QUESTION	SENIORS		PARENTS		PERSONNEL		COLLEGE	
	n	val %	n	val %	n	val %	n	val %
Current college rank:								
freshman								
sophomore	-	-	-	-	-	-	108	66.3
junior	-	-	-	-	-	-	36	22.1
senior	-	-	-	-	-	-	11	6.7
no response/invalid	-	-	-	-	-	-	8	4.9
Total valid	-	-	-	-	-	-	(1)	-
Live on campus?	-	-	-	-	-	-	163	100.0
yes								
no	-	-	-	-	-	-	1	0.6
no response/invalid	-	-	-	-	-	-	163	99.4
Total valid	-	-	-	-	-	-	0	-
Live with parents?	-	-	-	-	-	-	164	100.0
yes								
no	-	-	-	-	-	-	11	6.7
no response/invalid	-	-	-	-	-	-	153	93.3
Total valid	-	-	-	-	-	-	0	-
Estimated college GPA:	-	-	-	-	-	-	164	100.0
3.5-4.0 (B+/A)								
3.0-3.4 (B)	-	-	-	-	-	-	57	37.0
2.5-2.9 (C+)	-	-	-	-	-	-	47	30.5
2.0-2.4 (C)	-	-	-	-	-	-	32	20.8
1.5-1.9 (D+)	-	-	-	-	-	-	16	10.4
1.0-1.4 (D)	-	-	-	-	-	-	2	1.3
no response/invalid	-	-	-	-	-	-	0	0
Total valid	-	-	-	-	-	-	(10)	-
	-	-	-	-	-	-	154	100.0

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APPENDIX III
TABLES

TABLE 0.1
ESTIMATED PERCENTAGE OF HIGH SCHOOL GRADUATES INTENDING TO PARTICIPATE[a] IN HIGHER EDUCATION

REGION	90-91	89-90	88-89	87-88	86-87	85-86	85-91 Av.	State Rank	App. Rank
Ohio	59.0	56.3	54.4	53.4	51.0	49.0	53.8	-	-
Appalachia	49.3	45.5	45.0	42.3	39.6	38.8	43.4	-	-
Adams	46.1	37.3	36.4	30.5	31.6	32.3	35.7	85	27
Athens*	65.5	57.5	51.4	53.7	48.3	47.3	53.9	21	2
Belmont*	65.7	58.5	56.4	46.7	47.6	40.9	52.6	28	3
Brown	45.7	40.1	35.2	31.0	34.8	31.0	36.3	84	26
Carroll	40.2	50.4	40.0	38.7	43.4	33.2	40.9	78	20
Clermont	48.4	51.6	49.3	48.2	43.7	39.9	46.8	48	7
Columbiana	52.8	43.6	41.4	44.0	44.2	39.5	44.2	68	16
Coshocton*	44.0	46.9	57.3	45.5	40.3	42.5	46.0	51	8
Gallia	56.7	37.8	41.8	48.5	43.7	43.3	45.3	59	11
Guernsey*	58.0	52.4	43.6	43.3	46.3	41.7	47.5	46	6
Harrison	50.3	41.5	57.4	46.2	37.0	38.7	45.1	62	13
Highland	35.3	45.6	40.0	39.7	30.7	34.3	37.6	82	24
Hocking	47.8	39.1	50.5	49.9	50.0	29.4	44.4	67	15
Holmes	38.6	41.1	35.4	36.4	38.1	52.0	40.2	79	21
Jackson	45.5	45.7	44.3	39.6	43.2	40.8	43.1	72	17
Jefferson*	57.9	56.5	60.9	55.8	49.4	50.3	55.1	21	1
Lawrence*	41.8	40.3	43.3	37.3	35.5	31.0	38.2	81	23
Meigs*	47.4	47.3	45.9	45.3	45.0	40.4	45.2	60	12
Monroe	48.8	46.6	46.8	45.9	45.3	34.2	44.6	66	14
Morgan	30.6	29.9	43.4	41.8	24.7	-	34.0	86	28
Muskingum*	50.8	46.4	46.4	38.4	36.4	37.0	42.5	75	19
Noble	57.5	54.6	40.5	36.5	30.7	35.8	42.6	73	18
Perry	47.9	44.9	38.2	41.7	32.6	31.7	39.5	80	22
Pike*	41.8	40.8	38.3	35.6	34.2	28.7	36.5	83	25
Ross*	45.6	49.2	48.3	47.8	41.6	41.4	45.6	56	9
Scioto*	47.7	52.6	42.5	44.6	39.6	45.9	45.4	58	10
Tuscarawas	56.3	50.0	49.3	46.9	41.7	41.4	47.6	47	5
Vinton*	45.6	34.9	33.5	24.0	17.8	38.2	32.6	88	29
Washington	69.6	37.0	47.1	41.8	49.6	44.0	48.1	42	4

*County selected for the survey

Source: Ohio Department of Education. Form OCCD-75, 1986-1991, (Columbus: Ohio Department of Education, 1986-1991).

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[a] See page 22 for a discussion of how the participation rate is derived.

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TABLE II.1
EDUCATIONAL ATTAINMENT IN OHIO APPALACHIA 1990
18 YEARS AND OVER

REGION	% LESS THAN 9TH GRADE	% 9-12 NO DIPLOMA	% HIGH SCHOOL GRADUATE*	% SOME COLLEGE NO DEGREE	% ASSOCIATE DEGREE	% BACHELOR DEGREE	% POST GRADUATE DEGREE
Ohio	7.0	16.9	36.0	19.3	5.1	10.5	5.1
Appalachia	11.8	19.9	42.7	13.3	4.1	5.2	2.7
Appalachia (exc. Clermont)	11.9	20.0	42.9	13.2	4.1	5.1	2.6
Adams	18.5	22.4	41.1	9.6	3.4	2.9	1.9
Athens	5.3	13.3	27.1	31.2	4.7	9.7	8.0
Belmont	10.5	16.6	45.2	13.9	5.2	5.5	2.9
Brown	12.8	21.6	41.4	13.5	4.1	3.9	2.7
Carroll	8.6	19.4	49.4	11.7	3.4	4.4	2.7
Clermont	8.5	18.3	37.2	17.6	5.1	9.2	3.9
Columbiana	8.8	19.1	44.9	14.6	4.6	5.3	2.6
Coshocton	9.9	18.8	48.2	11.7	3.3	5.4	2.2
Gallia	14.4	20.1	37.3	14.2	3.9	6.2	3.7
Guernsey	8.9	19.7	44.6	13.7	4.2	6.3	2.3
Harrison	10.1	19.9	47.0	12.5	3.7	4.6	1.7
Highland	11.9	21.7	42.3	12.5	3.9	5.2	2.2
Hocking	9.0	22.2	43.5	13.2	4.4	5.1	2.4
Holmes	35.6	19.2	28.9	7.8	2.4	4.2	1.5
Jackson	14.2	23.7	39.7	11.7	3.1	4.6	2.6
Jefferson	9.5	17.7	44.9	14.3	5.0	5.9	2.5
Lawrence	11.6	22.0	41.1	14.2	3.8	4.8	2.8
Meigs	13.7	21.8	42.5	10.7	4.6	4.5	2.2
Monroe	13.0	16.7	50.5	9.7	3.9	3.9	2.3
Morgan	9.7	18.2	50.6	10.9	3.8	4.6	2.1
Muskingum	8.4	19.4	42.7	15.5	4.9	6.0	3.1
Noble	8.4	21.5	53.5	8.7	3.3	3.8	1.4
Perry	9.3	21.5	49.1	10.4	4.3	3.4	1.9
Pike	16.1	22.3	38.0	11.7	4.4	4.4	2.9
Ross	9.5	22.4	39.9	14.7	4.7	5.8	2.6
Scioto	14.6	20.3	36.3	15.9	5.1	4.9	2.8
Tuscarawas	9.3	18.5	46.5	13.1	4.2	5.6	2.7
Vinton	14.6	24.7	42.8	9.7	3.1	2.9	1.5
Washington	7.1	14.7	43.2	17.3	5.8	8.4	3.8

*High School Graduates are persons who received either a high school diploma or equivalent (GED) and **did not** attend college.

Source: Ohio Data User's Center, 1990 STF3 Subject Report Series: June, 1992.

TABLE V.1
NET MIGRATION[a] FROM OHIO APPALACHIA 1980-1990

REGION AND AGE GROUP	POPULATION 1990	NET MIGRATION	MIGRATION RATE (%)
Ohio:			
0-19	3,141,025	-116,310	-3.7
20-34	2,590,325	-251,788	-9.7
35-64	3,708,804	-196,744	-5.3
65+	1,406,961	-56,179	-4.0
Total	10,847,115	-621,021	-5.7
Appalachia:			
0-19	410,764	-9,244	-2.3
20-34	304,520	-54,189	-17.8
35-64	470,035	-10,709	-2.3
65+	187,574	-2,362	-1.3
Total	1,372,883	-76,504	-5.6
Appalachia (exc. Clermont):			
0-19	362,361	-10,605	-2.9
20-34	266,750	-56,733	-21.3
35-64	419,072	-12,407	-3.0
65+	174,523	-3,275	-1.9
Total	1,222,696	-83,020	-6.8
Adams:			
0-19	8,124	385	4.7
20-34	5,340	-1,162	-21.8
35-64	8,472	529	6.2
65+	3,435	-50	-1.5
Total	25,371	-298	-1.2
Athens:			
0-19	17,847	-524	-2.9
20-34	20,057	1,695	8.5
35-64	15,802	-1,301	-8.2
65+	5,843	-259	-4.4
Total	53,549	-389	-0.8
Belmont:			
0-19	18,708	-2,500	-13.4
20-34	13,692	-6,090	-44.5
35-64	25,348	-3,158	-12.5
65+	13,326	-899	-6.7
Total	71,074	-12,647	-15.3

Source: Net Migration. Ohio and Counties: 1980 to 1990 by Age, Sex, and Race. (Columbus: Ohio Data User's Center, Ohio Department of Development, May 1992).

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[a] Net migration equals the number of individuals entering the region minus the number of individuals leaving the region.

TABLE V.1 (cont.)
NET MIGRATION[b] FROM OHIO APPALACHIA 1980-1990

REGION AND AGE GROUP	POPULATION 1990	NET MIGRATION	MIGRATION RATE (%)
Brown:			
0-19	11,027	514	4.7
20-34	7,787	-568	-7.3
35-64	11,682	818	7.0
65+	4,470	114	2.6
Total	34,966	878	2.5
Carroll:			
0-19	8,009	120	1.5
20-34	5,544	-909	-16.4
35-64	9,347	52	0.6
65+	3,621	82	2.3
Total	26,521	-655	-2.5
Clermont:			
0-19	48,403	1,361	2.8
20-34	37,770	2,544	6.7
35-64	50,963	1,698	3.3
65+	13,051	913	7.0
Total	150,187	6,516	4.6
Columbiana:			
0-19	31,846	-1,151	-3.6
20-34	22,288	-6,111	-27.4
35-64	38,051	-2,091	-5.5
65+	16,091	-291	-1.8
Total	108,276	-9,644	-8.3
Coshocton:			
0-19	10,592	-177	-1.7
20-34	7,274	-1,714	-23.6
35-64	12,457	-377	-3.0
65+	5,104	-214	-4.2
Total	35,427	-2,482	-6.6
Gallia:			
0-19	9,347	94	1.0
20-34	6,928	-859	-12.4
35-64	10,704	173	1.6
65+	3,975	82	2.1
Total	30,954	-510	-1.7

Source: Net Migration. Ohio and Counties: 1980 to 1990 by Age, Sex, and Race. (Columbus: Ohio Data User's Center, Ohio Department of Development, May 1992).

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[b] Net migration equals the number of individuals entering the region minus the number of individuals leaving the region.

TABLE V.1 (cont.)
NET MIGRATION[c] FROM OHIO APPALACHIA 1980-1990

REGION AND AGE GROUP	POPULATION 1990	NET MIGRATION	MIGRATION RATE (%)
Guernsey:			
0-19	11,606	-1,147	-9.9
20-34	8,094	-2,190	-27.1
35-64	13,496	-820	-6.1
65+	5,828	-260	-4.5
Total	39,024	-4,417	-10.4
Harrison:			
0-19	4,518	-309	-6.8
20-34	3,067	-1,388	-45.3
35-64	5,710	-455	-8.0
65+	2,790	-39	-1.4
Total	16,085	-2,191	-12.2
Highland:			
0-19	10,800	486	4.5
20-34	7,487	-742	-9.9
35-64	12,084	845	7.0
65+	5,357	124	2.3
Total	35,728	713	2.0
Hocking:			
0-19	7,565	146	1.9
20-34	5,481	-777	-14.2
35-64	9,087	315	3.5
65+	3,400	-54	-1.6
Total	25,523	-370	-1.5
Holmes:			
0-19	12,812	-527	-4.1
20-34	7,090	-998	-14.1
35-64	9,417	-147	-1.6
65+	3,530	156	4.4
Total	32,849	-1,516	-4.6
Jackson:			
0-19	9,219	-173	-1.9
20-34	6,452	-1,323	-20.5
35-64	10,327	-48	-0.4
65+	4,232	-33	-0.8
Total	30,230	-1,577	-5.2

Source: Net Migration. Ohio and Counties: 1980 to 1990 by Age, Sex, and Race. (Columbus: Ohio Data User's Center, Ohio Department of Development, May 1992).

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[c] Net migration equals the number of individuals entering the region minus the number of individuals leaving the region.

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TABLE V.1 (cont.)
NET MIGRATION[a] FROM OHIO APPALACHIA 1980-1990

REGION AND AGE GROUP	POPULATION 1990	NET MIGRATION	MIGRATION RATE (%)
Jefferson:			
0-19	21,413	-682	-3.7
20-34	15,457	-3,161	-24.3
35-64	29,619	-846	-3.9
65+	13,809	-69	-0.8
Total	80,298	-4758	-7.7
Lawrence:			
0-19	18,675	-1,521	-7.1
20-34	13,005	-7,321	-47.4
35-64	21,936	-2,346	-7.9
65+	8,218	-933	-6.8
Total	61,834	-12,121	-15.1
Meigs:			
0-19	6,834	-57	-0.8
20-34	4,629	-1,260	-27.2
35-64	8,074	-77	-1.0
65+	3,450	-199	-5.8
Total	22,987	-1,593	-6.9
Monroe:			
0-19	4,413	-239	-5.4
20-34	3,003	-1,500	-50.0
35-64	5,661	-370	-6.5
65+	2,420	-250	-10.3
Total	15,497	-2,359	-15.2
Morgan:			
0-19	4,422	19	0.4
20-34	2,872	-731	-25.5
35-64	4,767	77	1.6
65+	2,133	-51	-2.4
Total	14,194	-686	-4.8

Source: Net Migration. Ohio and Counties: 1980 to 1990 by Age, Sex, and Race. (Columbus: Ohio Data User's Center, Ohio Department of Development, May 1992).

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[a] Net migration equals the number of individuals entering the region minus the number of individuals leaving the region.

TABLE V.1 (cont.)
NET MIGRATION[a] FROM OHIO APPALACHIA 1980-1990

REGION AND AGE GROUP	POPULATION 1990	NET MIGRATION	MIGRATION RATE (%)
Muskingum:			
0-19	24,570	-1,250	-5.1
20-34	18,473	-3,575	-19.4
35-64	27,672	-1,004	-3.6
65+	11,353	107	0.9
Total	82,068	-5,722	-7.0
Noble:			
0-19	3,573	-11	-0.3
20-34	2,346	-519	-22.1
35-64	3,713	7	0.1
65+	1,704	-89	-5.2
Total	11,336	-612	-5.4
Perry:			
0-19	10,048	2	0.0
20-34	7,090	-1,400	-19.7
35-64	10,338	35	0.3
65+	4,081	-53	-1.3
Total	31,557	-1,416	-4.5
Pike:			
0-19	7,651	489	6.4
20-34	5,274	-763	-14.5
35-64	8,034	389	4.8
65+	3,290	104	3.2
Total	24,249	219	0.9
Ross:			
0-19	19,163	401	2.1
20-34	17,049	-1,751	-10.3
35-64	24,548	247	1.0
65+	8,570	-26	-0.3
Total	69,330	-1,129	-1.6

Source: Net Migration. Ohio and Counties: 1980 to 1990 by Age, Sex, and Race. (Columbus: Ohio Data User's Center, Ohio Department of Development, May 1992).

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[a] Net migration equals the number of individuals entering the region minus the number of individuals leaving the region.

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TABLE V.1 (cont.)
NET MIGRATION[†] FROM OHIO APPALACHIA 1980-1990

REGION AND AGE GROUP	POPULATION 1990	NET MIGRATION	MIGRATION RATE (%)
Scioto:			
0-19	23,906	-1,091	-4.6
20-34	17,242	-4,832	-28.0
35-64	27,237	-1,279	-4.7
65+	11,942	-302	-2.6
Total	80,327	-7,504	-9.3
Tuscarawas:			
0-19	24,298	-595	-2.4
20-34	17,807	-3,261	-18.3
35-64	29,461	-563	-1.9
65+	12,524	136	1.1
Total	84,090	-4,283	-5.1
Vinton:			
0-19	3,449	-142	-4.1
20-34	2,355	-592	-25.1
35-64	3,769	-120	-3.2
65+	1,525	-108	-7.1
Total	11,098	-962	-8.7
Washington:			
0-19	17,926	-1,165	-6.5
20-34	13,567	-2,931	-21.6
35-64	22,259	-892	-4.0
65+	8,502	-1	0.0
Total	62,254	-4,989	-8.0

Source: Net Migration. Ohio and Counties: 1980 to 1990 by Age, Sex, and Race. (Columbus: Ohio Data User's Center, Ohio Department of Development, May 1992).

[†] Net migration equals the number of individuals entering the region minus the number of individuals leaving the region.

TABLE V.2
ECONOMIC CHARACTERISTICS OF OHIO APPALACHIA

REGION	PER CAPITA INCOME 1989[a]	MEDIAN FAMILY INCOME 1989	POVERTY RATE 1990	UNEMPLOYMENT RATE 1990
Ohio	13,461	34,351	15.0	6.5
Appalachia	9,929	26,171	23.1	7.9
Appalachia (exc. Clermont)	9,808	25,802	23.6	8.0
Adams	8,407	21,226	32.9	12.0
Athens	9,170	25,702	24.2	5.9
Belmont	10,329	25,945	20.5	5.7
Brown	10,498	28,840	24.6	7.9
Carroll	10,693	29,341	22.6	6.2
Clermont	13,338	36,511	10.2	5.0
Columbiana	10,567	27,666	20.9	5.9
Coshocton	10,685	28,606	18.1	6.5
Gallia	9,711	25,077	25.6	7.7
Guernsey	9,929	25,225	25.9	8.7
Harrison	9,146	24,432	32.4	11.1
Highland	9,648	26,224	21.4	8.0
Hocking	10,265	26,715	18.0	9.4
Holmes	9,191	27,531	22.3	4.7
Jackson	9,228	22,611	23.3	8.5
Jefferson	11,001	27,839	22.6	6.1
Lawrence	9,336	23,603	27.5	6.2
Meigs	8,644	21,884	27.6	7.5
Monroe	9,101	24,162	27.5	10.8
Morgan	9,373	25,847	21.0	8.7
Muskingum	10,844	29,480	18.1	8.5
Noble	9,028	25,625	29.5	8.5
Perry	9,247	24,985	18.5	11.9
Pike	8,958	22,567	32.1	9.7
Ross	10,758	28,634	18.2	8.1
Scioto	9,253	21,848	25.6	8.7
Tuscarawas	11,141	29,303	12.9	6.4
Vinton	8,826	21,693	33.5	9.1
Washington	11,438	29,863	13.6	6.0

Sources: CEOGC, 139; Bureau of the Census, 1990 Census of Population and Housing. Summary Social, Economic and Housing Characteristics Ohio 1990 CPH-5-37 (Washington, DC: Government Printing Office, 1992), 237; Sam Crawford, Ohio Appalachian Counties (Jackson: Ohio Cooperative Extension Service, Ohio State University, 1992).

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[a] 1989 dollars.

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TABLE V.3
NUMBER OF FAMILIES AND PERSONS PER FAMILY[a] IN OHIO APPALACHIA, 1990

REGION	NUMBER OF FAMILIES	PERSONS PER FAMILY
Ohio	2,895,223	3.12
Appalachia	375,772	3.14
Appalachia (exc. Clermont)	334,425	3.13
Adams	7,056	3.17
Athens	12,508	3.05
Belmont	20,219	3.00
Brown	9,755	3.19
Carroll	7,432	3.12
Clermont	41,347	3.23
Columbiana	30,445	3.10
Coshocton	9,900	3.09
Gallia	8,543	3.09
Guernsey	10,790	3.07
Harrison	4,564	3.05
Highland	9,986	3.13
Hocking	7,108	3.09
Holmes	7,693	3.88
Jackson	8,491	3.12
Jefferson	22,603	3.02
Lawrence	17,574	3.11
Meigs	6,485	3.08
Monroe	4,423	3.11
Morgan	3,904	3.16
Muskingum	22,494	3.09
Noble	3,136	3.19
Perry	8,669	3.22
Pike	6,742	3.14
Ross	18,057	3.08
Scioto	21,676	3.10
Tuscarawas	23,634	3.08
Vinton	3,117	3.13
Washington	17,421	3.04

Source: U.S. Bureau of the Census, Census of Population and Housing, 1990: Summary Tape File 1 on CD-ROM, Ohio, prepared by Bureau of the Census (Washington, DC: The Bureau, 1991).

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[a] The Bureau of the Census defines a family as "a householder and one or more other persons living in the same household who are related to the householder by birth, marriage, or adoption" where a householder is "the person , or one of the persons, in whose name the home is owned, being bought or rented." U.S. Bureau of the Census, Census of Population and Housing, 1990: Summary Tape File 1 on CD-ROM Technical Documentation, prepared by Bureau of the Census (Washington, DC: The Bureau, 1991): B-8, B-10.

TABLE V.4
APPALACHIAN REGION EMPLOYMENT GROWTH BY COUNTY 1980-1989

REGION	% GROWTH	ABSOLUTE GROWTH	RANKED BY % GROWTH
United States	3.8	2,836,397	-
Appalachian Region	8.6	25,296	-
Appalachian Region (exc. Clermont)	3.9	10,940	-
Adams	-16.2	-395	26
Athens*	27.6	2,195	3
Belmont*	-23.9	-4,771	28
Brown	13.0	599	9
Carroll	18.2	669	4
Clermont	92.8	14,356	1
Columbiana	5.5	1,413	15
Coshocton*	14.9	1,620	7
Gallia	9.7	697	10
Guernsey*	1.9	224	20
Harrison	-40.0	-1,756	29
Highland	15.3	982	6
Hocking	2.6	130	19
Holmes	57.5	3,366	2
Jackson	9.0	531	11
Jefferson*	-11.4	-2,772	24
Lawrence*	3.2	245	18
Meigs	5.6	215	14
Monroe	-17.3	-1,094	27
Morgan	-13.9	-460	25
Muskingum*	16.5	3,932	5
Noble	-5.3	-100	23
Perry	3.9	186	17
Pike*	5.8	338	13
Ross*	7.0	1,104	12
Scioto*	4.3	666	16
Tuscarawas	13.3	3,168	8
Vinton*	-4.8	-104	22
Washington	0.7	121	21

*County selected for the survey

Source: ILGARD shift-share analysis, 1992

TABLE V.5

CHANGES IN INDUSTRIAL COMPOSITION AND EMPLOYMENT FOR EACH COUNTY 1980-1989 AT THE ONE-DIGIT SIC LEVEL

COUNTY AND BUSINESS SECTORS (ranked in terms of percentage growth 1980-89)	1980 EMPLOYMENT	1989 EMPLOYMENT	EMPLOYMENT CHANGE	% GROWTH
Clermont County (1)				
Agricultural services, forestry, and fisheries	60	174	114	190.00
Mining	10	10	0	0.00
Contract construction	948	2270	1322	139.45
Manufacturing	4179	6931	2752	65.85
Transport and public utilities	951	1404	453	47.63
Wholesale trade	435	1358	923	212.18
Retail trade	4459	9360	4901	109.91
Finance, insurance, and real estate	1173	1284	111	9.46
Services	3258	7038	3780	116.02
TOTAL	**15473**	**29829**	**14356**	**92.78**
Holmes County (2)				
Agricultural services, forestry, and fisheries	60	31	-29	-48.33
Mining	297	263	-34	-11.45
Contract construction	202	288	86	42.57
Manufacturing	2795	4753	1958	70.05
Transport and public utilities	160	347	187	116.88
Wholesale trade	222	374	152	68.47
Retail trade	932	1489	557	59.76
Finance, insurance, and real estate	184	254	70	38.04
Services	1001	1420	419	41.86
TOTAL	**5853**	**9219**	**3366**	**57.51**
Athens County (3)				
Agricultural services, forestry, and fisheries	60	40	-20	-33.33
Mining	60	10	-50	-83.33
Contract construction	309	407	98	31.72
Manufacturing	1349	1196	-153	-11.34
Transport and public utilities	643	609	-34	-5.29
Wholesale trade	333	458	125	37.54
Retail trade	3009	3941	932	30.97
Finance, insurance, and real estate	616	528	-88	-14.29
Services	1574	2959	1385	87.99
TOTAL	**7953**	**10148**	**2195**	**27.60**

Source: ILGARD Shift-Share Analysis, 1992.

TABLE V.5 (cont.)
CHANGES IN INDUSTRIAL COMPOSTITION AND EMPLOYMENT FOR EACH COUNTY 1980-1989 AT THE ONE-DIGIT SIC LEVEL

COUNTY AND BUSINESS SECTORS (ranked in terms of percentage growth 1980-89)	1980 EMPLOYMENT	1989 EMPLOYMENT	EMPLOYMENT CHANGE	% GROWTH
Carroll County (4)				
Agricultural services, forestry, and fisheries	10	48	38	380.00
Mining	60	80	20	33.33
Contract construction	106	125	19	17.92
Manufacturing	1774	1863	89	5.02
Transport and public utilities	233	180	-53	-22.75
Wholesale trade	153	152	-1	-0.65
Retail trade	776	1005	229	29.51
Finance, insurance, and real estate	116	99	-17	-14.66
Services	451	796	345	76.50
TOTAL	**3679**	**4348**	**669**	**18.18**
Muskingum County (5)				
Agricultural services, forestry, and fisheries	79	53	-26	-32.91
Mining	1332	907	-425	-31.91
Contract construction	860	835	-25	-2.91
Manufacturing	8145	8119	-26	-0.32
Transport and public utilities	1231	993	-238	-19.33
Wholesale trade	1861	1934	73	3.92
Retail trade	4636	6200	1564	33.74
Finance, insurance, and real estate	903	937	34	3.77
Services	4776	7777	3001	62.84
TOTAL	**23823**	**27755**	**3932**	**16.50**
Highland County (6)				
Agricultural services, forestry, and fisheries	28	31	3	10.71
Mining	91	75	-16	-17.58
Contract construction	187	270	83	44.38
Manufacturing	3121	3028	-93	-2.98
Transport and public utilities	244	232	-12	-4.92
Wholesale trade	376	329	-47	-12.50
Retail trade	1386	1825	439	31.67
Finance, insurance, and real estate	358	341	-17	-4.75
Services	634	1276	642	101.26
TOTAL	**6425**	**7407**	**982**	**15.28**

Source: ILGARD Shift-Share Analysis, 1992.

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TABLE V.5 (cont.)
CHANGES IN INDUSTRIAL COMPOSITION AND EMPLOYMENT FOR EACH COUNTY 1980-1989 AT THE ONE-DIGIT SIC LEVEL

COUNTY AND BUSINESS SECTORS (ranked in terms of percentage growth 1980-89)	1980 EMPLOYMENT	1989 EMPLOYMENT	EMPLOYMENT CHANGE	% GROWTH
Coshocton County (7)				
Agricultural services, forestry, and fisheries	10	37	27	270.00
Mining	648	184	-464	-71.60
Contract construction	277	247	-30	-10.83
Manufacturing	5243	6095	852	16.25
Transport and public utilities	1011	1066	55	5.44
Wholesale trade	329	284	-45	-13.68
Retail trade	1631	1793	162	9.93
Finance, insurance, and real estate	358	420	62	17.32
Services	1336	2337	1001	74.92
TOTAL	**10843**	**12463**	**1620**	**14.94**
Tuscarawas County (8)				
Agricultural services, forestry, and fisheries	60	169	109	181.67
Mining	1067	859	-208	-19.49
Contract construction	1060	1091	31	2.92
Manufacturing	8953	8900	-53	-0.59
Transport and public utilities	939	941	2	0.21
Wholesale trade	1418	1355	-63	-4.44
Retail trade	5210	6853	1643	31.54
Finance, insurance, and real estate	828	843	15	1.81
Services	4252	5944	1692	39.79
TOTAL	**23787**	**26955**	**3168**	**13.32**
Brown County (9)				
Agricultural services, forestry, and fisheries	10	20	10	100.00
Mining	10	10	0	0.00
Contract construction	182	196	14	7.69
Manufacturing	1269	1546	277	21.83
Transport and public utilities	750	750	0	0.00
Wholesale trade	330	223	-107	-32.42
Retail trade	1011	1141	130	12.86
Finance, insurance, and real estate	175	201	26	14.86
Services	857	1106	249	29.06
TOTAL	**4594**	**5193**	**599**	**13.04**

Source: ILGARD Shift-Share Analysis, 1992.

TABLE V.5 (cont.)
CHANGES IN INDUSTRIAL COMPOSITION AND EMPLOYMENT FOR EACH COUNTY 1980-1989 AT THE ONE-DIGIT SIC LEVEL

COUNTY AND BUSINESS SECTORS (ranked in terms of percentage growth 1980-89)	1980 EMPLOYMENT	1989 EMPLOYMENT	EMPLOYMENT CHANGE	% GROWTH
Gallia County (10)				
Agricultural services, forestry, and fisheries	10	10	0	0.00
Mining	217	175	-42	-19.36
Contract construction	234	177	-57	-24.36
Manufacturing	1300	1018	-282	-21.69
Transport and public utilities	1178	1254	76	6.45
Wholesale trade	367	422	55	14.99
Retail trade	1600	2191	591	36.94
Finance, insurance, and real estate	255	298	43	16.86
Services	2042	2355	313	15.33
TOTAL	**7203**	**7900**	**697**	**9.68**
Jackson County (11)				
Agricultural services, forestry, and fisheries	10	7	-3	-30.00
Mining	212	126	-86	-40.57
Contract construction	164	173	9	5.49
Manufacturing	2442	2391	-51	-2.09
Transport and public utilities	439	250	-189	-43.05
Wholesale trade	259	302	43	16.60
Retail trade	1101	1584	483	43.87
Finance, insurance, and real estate	294	287	-7	-2.38
Services	963	1295	332	34.48
TOTAL	**5884**	**6415**	**531**	**9.02**
Ross County ()				
Agricultural services, forestry, and fisheries	60	43	-17	-28.33
Mining	60	37	-23	-38.33
Contract construction	560	729	169	30.18
Manufacturing	6690	4972	-1718	-25.68
Transport and public utilities	623	609	-14	-2.25
Wholesale trade	621	548	-73	-11.76
Retail trade	3707	4207	500	13.49
Finance, insurance, and real estate	634	618	-16	-2.52
Services	2931	5227	2296	78.34
TOTAL	**15886**	**16990**	**1104**	**6.95**

Source: ILGARD Shift-Share Analysis, 1992.

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TABLE V.5 (cont.)
CHANGES IN INDUSTRIAL COMPOSITION AND EMPLOYMENT FOR EACH COUNTY 1980-1989 AT THE ONE-DIGIT SIC LEVEL

COUNTY AND BUSINESS SECTORS (ranked in terms of percentage growth 1980-89)	1980 EMPLOYMENT	1989 EMPLOYMENT	EMPLOYMENT CHANGE	% GROWTH
Pike County (13)				
Agricultural services, forestry, and fisheries	10	10	0	0.00
Mining	38	60	22	57.90
Contract construction	182	247	65	35.71
Manufacturing	3750	3446	-304	-8.12
Transport and public utilities	246	169	-77	-31.30
Wholesale trade	159	128	-31	-19.50
Retail trade	750	1078	328	43.73
Finance, insurance, and real estate	193	144	-49	-25.39
Services	550	934	384	69.82
TOTAL	**5878**	**6216**	**338**	**5.75**
Meigs County (14)				
Agricultural services, forestry, and fisheries	10	60	50	500.00
Mining	1750	1750	0	0.0
Contract construction	105	184	79	75.24
Manufacturing	375	227	-148	-39.47
Transport and public utilities	181	54	-127	-70.17
Wholesale trade	122	104	-18	-14.75
Retail trade	818	924	106	12.96
Finance, insurance, and real estate	135	105	-30	-22.22
Services	373	676	303	81.23
TOTAL	**3869**	**4084**	**215**	**5.56**
Columbiana County (15)				
Agricultural services, forestry, and fisheries	53	74	21	39.62
Mining	376	316	-60	-15.96
Contract construction	884	658	-226	-25.57
Manufacturing	10312	9673	-639	-6.20
Transport and public utilities	1054	985	-69	-6.55
Wholesale trade	1135	949	-186	-16.39
Retail trade	5986	6431	445	7.43
Finance, insurance, and real estate	1080	1172	92	8.52
Services	4744	6779	2035	42.90
TOTAL	**25624**	**27037**	**1413**	**5.51**

Source: ILGARD Shift-Share Analysis, 1992.

TABLE V.5 (cont.)
CHANGES IN INDUSTRIAL COMPOSITION AND EMPLOYMENT FOR EACH COUNTY 1980-1989 AT THE ONE-DIGIT SIC LEVEL

COUNTY AND BUSINESS SECTORS (ranked in terms of percentage growth 1980-89)	1980 EMPLOYMENT	1989 EMPLOYMENT	EMPLOYMENT CHANGE	% GROWTH
Scioto County (16)				
Agricultural services, forestry, and fisheries	26	49	23	88.46
Mining	36	35	-1	-2.78
Contract construction	823	790	-33	-4.01
Manufacturing	3120	2225	-895	-28.69
Transport and public utilities	539	626	87	16.14
Wholesale trade	745	876	131	17.58
Retail trade	4414	5034	620	14.05
Finance, insurance, and real estate	959	775	-184	-19.19
Services	4671	5589	918	19.65
TOTAL	**15333**	**15999**	**666**	**4.34**
Perry County (17)				
Agricultural services, forestry, and fisheries	60	10	-50	-83.33
Mining	1118	548	-570	-50.98
Contract construction	143	151	8	5.59
Manufacturing	1790	1722	-68	-3.80
Transport and public utilities	173	128	-45	-26.01
Wholesale trade	58	56	-2	-3.45
Retail trade	724	1141	417	57.60
Finance, insurance, and real estate	177	165	-12	-6.78
Services	554	1062	508	91.70
TOTAL	**4797**	**4983**	**186**	**3.88**
Lawrence County (18)				
Agricultural services, forestry, and fisheries	10	26	16	160.00
Mining	90	60	-30	-33.33
Contract construction	297	639	342	115.15
Manufacturing	1997	1335	-662	-33.15
Transport and public utilities	570	683	113	19.82
Wholesale trade	428	377	-51	-11.92
Retail trade	2421	2553	132	5.45
Finance, insurance, and real estate	458	483	25	5.46
Services	1513	1873	360	23.79
TOTAL	**7784**	**8029**	**245**	**3.15**

Source: ILGARD Shift-Share Analysis, 1992.

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TABLE V.5 (cont.)
CHANGES IN INDUSTRIAL COMPOSITION AND EMPLOYMENT FOR EACH COUNTY 1980-1989 AT THE ONE-DIGIT SIC LEVEL

COUNTY AND BUSINESS SECTORS (ranked in terms of percentage growth 1980-89)	1980 EMPLOYMENT	1989 EMPLOYMENT	EMPLOYMENT CHANGE	% GROWTH
Hocking County (19)				
Agricultural services, forestry, and fisheries	10	11	1	10.00
Mining	247	78	-169	-68.42
Contract construction	146	251	105	71.92
Manufacturing	2691	2399	-292	-10.85
Transport and public utilities	91	129	38	41.76
Wholesale trade	131	133	2	1.53
Retail trade	1018	1061	43	4.22
Finance, insurance, and real estate	188	137	-51	-27.13
Services	396	849	453	114.39
TOTAL	**4918**	**5048**	**130**	**2.64**
Guernsey County (20)				
Agricultural services, forestry, and fisheries	10	47	37	370.00
Mining	790	258	-532	-67.34
Contract construction	378	436	58	15.34
Manufacturing	4893	3533	-1360	-27.80
Transport and public utilities	560	512	-48	-8.57
Wholesale trade	432	592	160	37.04
Retail trade	2419	2634	215	8.89
Finance, insurance, and real estate	516	443	-73	-14.15
Services	1906	3673	1767	92.71
TOTAL	**11904**	**12128**	**224**	**1.88**
Washington County (21)				
Agricultural services, forestry, and fisheries	35	90	55	157.14
Mining	597	260	-337	-56.45
Contract construction	1243	1325	82	6.60
Manufacturing	5900	4805	-1095	-18.56
Transport and public utilities	1166	1191	25	2.14
Wholesale trade	976	1067	91	9.32
Retail trade	3320	3931	611	18.40
Finance, insurance, and real estate	630	849	219	34.76
Services	4183	4653	470	11.24
TOTAL	**18050**	**18171**	**121**	**0.67**

Source: ILGARD Shift-Share Analysis, 1992.

TABLE V.5 (cont.)
CHANGES IN INDUSTRIAL COMPOSITION AND EMPLOYMENT FOR EACH COUNTY 1980-1989 AT THE ONE-DIGIT SIC LEVEL

COUNTY AND BUSINESS SECTORS (ranked in terms of percentage growth 1980-89)	1980 EMPLOYMENT	1989 EMPLOYMENT	EMPLOYMENT CHANGE	% GROWTH
Vinton County (22)				
Agricultural services, forestry, and fisheries	0	0	0	0.00
Mining	832	671	-161	-19.35
Contract construction	76	43	-33	-43.42
Manufacturing	768	575	-193	-25.13
Transport and public utilities	102	116	14	13.73
Wholesale trade	74	72	-2	-2.70
Retail trade	161	295	134	83.23
Finance, insurance, and real estate	64	112	48	75.00
Services	90	179	89	98.89
TOTAL	**2167**	**2063**	**-104**	**-4.80**
Noble County (23)				
Agricultural services, forestry, and fisheries	60	10	-50	-83.33
Mining	185	133	-52	-28.11
Contract construction	78	51	-27	-34.62
Manufacturing	750	660	-90	-12.00
Transport and public utilities	34	66	32	94.12
Wholesale trade	60	35	-25	-41.67
Retail trade	383	389	6	1.57
Finance, insurance, and real estate	62	72	10	16.13
Services	264	360	96	36.36
TOTAL	**1876**	**1776**	**-100**	**-5.33**
Jefferson County (24)				
Agricultural services, forestry, and fisheries	24	48	24	100.00
Mining	715	407	-308	-43.08
Contract construction	824	743	-81	-9.83
Manufacturing	7500	4995	-2505	-33.40
Transport and public utilities	1424	1668	244	17.14
Wholesale trade	845	886	41	4.85
Retail trade	5935	5482	-453	-7.63
Finance, insurance, and real estate	1066	1040	-26	-2.44
Services	5895	6187	292	4.95
TOTAL	**24228**	**21456**	**-2772**	**-11.44**

Source: ILGARD Shift-Share Analysis, 1992.

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TABLE V.5 (cont.)
CHANGES IN INDUSTRIAL COMPOSITION AND EMPLOYMENT FOR EACH COUNTY 1980-1989 AT THE ONE-DIGIT SIC LEVEL

COUNTY AND BUSINESS SECTORS (ranked in terms of percentage growth 1980-89)	1980 EMPLOYMENT	1989 EMPLOYMENT	EMPLOYMENT CHANGE	% GROWTH
Morgan County (25)				
Agricultural services, forestry, and fisheries	10	10	0	0.00
Mining	750	750	0	0.00
Contract construction	25	63	38	152.00
Manufacturing	1750	1132	-618	-35.31
Transport and public utilities	73	60	-13	-17.81
Wholesale trade	63	72	9	14.29
Retail trade	246	342	96	39.02
Finance, insurance, and real estate	80	78	-2	-2.50
Services	304	334	30	9.87
TOTAL	**3301**	**2841**	**-460**	**-13.94**
Adams County (26)				
Agricultural services, forestry, and fisheries	25	60	35	140.00
Mining	60	60	0	0.00
Contract construction	60	60	0	0.00
Manufacturing	938	323	-615	-65.56
Transport and public utilities	208	91	-117	-56.25
Wholesale trade	133	74	-59	-44.36
Retail trade	673	853	180	26.75
Finance, insurance, and real estate	128	122	-6	-4.69
Services	213	400	187	87.79
TOTAL	**2438**	**2043**	**-395**	**-16.20**
Monroe County (27)				
Agricultural services, forestry, and fisheries	10	10	0	0.00
Mining	1750	375	-1375	-78.57
Contract construction	50	108	58	116.00
Manufacturing	3750	3750	0	0.00
Transport and public utilities	38	74	36	94.74
Wholesale trade	66	88	22	33.33
Retail trade	458	438	-20	-4.37
Finance, insurance, and real estate	71	87	16	22.54
Services	144	313	169	117.36
TOTAL	**6337**	**5243**	**-1094**	**-17.26**

Source: ILGARD Shift-Share Analysis, 1992.

TABLE V.5 (cont.)

CHANGES IN INDUSTRIAL COMPOSITION AND EMPLOYMENT FOR EACH COUNTY 1980-1989 AT THE ONE-DIGIT SIC LEVEL

COUNTY AND BUSINESS SECTORS (ranked in terms of percentage growth 1980-89)	1980 EMPLOYMENT	1989 EMPLOYMENT	EMPLOYMENT CHANGE	% GROWTH
Belmont County (28)				
Agricultural services, forestry, and fisheries	47	61	14	29.79
Mining	4437	819	-3618	-81.54
Contract construction	563	651	88	15.63
Manufacturing	3918	1953	-1965	-50.15
Transport and public utilities	769	849	80	10.40
Wholesale trade	722	618	-104	-14.40
Retail trade	5707	5463	-244	-4.28
Finance, insurance, and real estate	776	781	5	0.64
Services	3011	3984	973	32.32
TOTAL	**19950**	**15179**	**-4771**	**-23.92**
Harrison County (29)				
Agricultural services, forestry, and fisheries	10	10	0	0.00
Mining	1629	473	-1156	-70.96
Contract construction	45	183	138	306.67
Manufacturing	1088	257	-831	-76.38
Transport and public utilities	255	228	-27	-10.59
Wholesale trade	279	246	-33	-11.83
Retail trade	457	412	-45	-9.85
Finance, insurance, and real estate	112	130	18	16.07
Services	539	710	171	31.73
TOTAL	**4414**	**2649**	**-1765**	**-39.99**

Source: ILGARD Shift-Share Analysis, 1992.

TABLE V.6
OHIO APPALACHIA POPULATION CHANGE 1980-1990 AND POPULATION PROJECTIONS FOR 2000 AND 2010

REGION	TOTAL POPULATION		PERCENTAGE CHANGE	POPULATION PROJECTIONS	
	1980	1990	1980-1990	2000	2010
Ohio	10,797,630	10,847,115	0.5	10,533,087	13,398,336
Appalachia	1,376,067	1,372,893	-0.2	1,395,521	1,379,401
Appalachia (exc. Clermont)	1,247,584	1,222,706	-2.0	1,232,357	1,202,438
Adams	24,328	25,371	4.3	25,255	24,622
Athens	56,399	59,549	5.6	60,770	62,494
Belmont	82,569	71,074	-13.9	76,112	71,768
Brown	31,920	34,966	9.5	38,755	41,246
Carroll	25,598	26,521	3.6	30,988	32,287
Clermont	128,483	150,187	16.9	163,164	176,963
Columbiana	113,572	108,276	-4.7	104,699	99,417
Coshocton	36,024	35,427	-1.7	37,131	37,097
Gallia	30,098	30,954	2.8	29,002	28,182
Guernsey	42,024	39,024	-7.1	38,964	37,533
Harrison	18,152	16,085	-11.4	11,759	9,836
Highland	33,477	35,728	6.7	35,821	35,754
Hocking	24,304	25,533	5.1	25,339	25,014
Holmes	29,416	32,849	11.7	31,734	32,284
Jackson	30,529	30,230	-1.2	26,798	24,553
Jefferson	91,564	80,298	-12.3	75,124	68,018
Lawrence	63,849	61,834	-3.2	58,308	54,945
Meigs	23,641	22,987	-2.8	22,583	21,187
Monroe	17,382	15,497	-10.8	13,307.	12,088
Morgan	14,241	14,194	-0.3	13,353	12,914
Muskingum	83,340	82,068	-1.5	84,953	82,856
Noble	11,310	11,336	0.2	10,961	10,944
Perry	31,032	31,557	1.7	33,497	33,800
Pike	22,802	24,249	6.3	27,159	27,211
Ross	65,004	69,330	6.7	74,888	76,479
Scioto	84,545	80,327	-5.0	81,773	77,515
Tuscarawas	84,614	84,090	-0.6	85,468	83,417
Vinton	11,584	11,098	-4.2	10,829	10,065
Washington	64,266	62.254	-3.1	67,027	68,912

SOURCE: U.S. Department of Commerce, Bureau of the Census, 1990 Census of Population and Housing by County-Ohio (Washington, DC, Government Printing Office, 1992); U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population. General Social and Economic Characteristics - Ohio, (Washington, DC: Government Printing Office, 1983); Ohio Data Users Center Population Projections, Population Projections Ohio and Counties by Age and Sex: 1980 to 2010 (Columbus, 1985).

TABLE V.7
UNDER-18 POPULATION CHANGE 1980-1990 IN OHIO APPALACHIA

REGION	UNDER 18 POPULATION		PERCENTAGE CHANGE
	1980	1990	
Ohio	3,094,000	2,823,000	-8.8
Appalachia	459,960	366,839	-20.2
Appalachia (exc. Clermont)	412,742	322,793	-21.8
Adams	8,719	7,358	-15.6
Athens	18,424	12,131	-34.2
Belmont	24,981	16,846	-32.6
Brown	11,386	10,012	-12.1
Carroll	8,880	7,252	-18.3
Clermont	47,218	44,046	-6.7
Columbiana	37,086	28,805	-22.3
Coshocton	11,838	9,679	-18.2
Gallia	9,858	8,266	-16.1
Guernsey	13,622	10,477	-23.1
Harrison	5,867	4,067	-30.7
Highland	11,070	9,792	-11.5
Hocking	8,199	6,793	-17.1
Holmes	12,075	11,773	-2.5
Jackson	10,269	8,303	-19.1
Jefferson	27,990	18,947	-32.3
Lawrence	21,855	16,707	-23.6
Meigs	7,811	6,182	-20.9
Monroe	5,850	3,987	-31.9
Morgan	4,870	4,070	-16.4
Muskingum	28,157	21,921	-22.1
Noble	3,834	3,282	-14.4
Perry	11,182	9,148	-18.2
Pike	7,920	6,965	-12.1
Ross	20,746	17,333	-16.5
Scioto	27,931	21,500	-23.0
Tuscarawas	26,848	22,152	-17.5
Vinton	4,024	3,077	-23.5
Washington	21,450	15,968	-25.6

Source: U.S. Bureau of the Census, Census of Population and Housing, 1990: Summary Tape File 1 on CD-ROM, Ohio, prepared by Bureau of the Census (Washington, DC: The Bureau, 1991).

TABLE V.8
DEPENDENCY RATIOS IN OHIO APPALACHIA

REGION	AGED DEPENDENCY RATIO[a]	YOUTH DEPENDENCY RATIO[b]	TOTAL DEPENDENCY RATIO[c]
Ohio	22.3	49.9	72.2
Appalachia	24.9	53.7	79.6
Adams	24.9	58.8	83.7
Athens	16.3	49.8	66.1
Belmont	34.1	47.9	82.1
Brown	23.0	56.6	79.6
Carroll	24.3	53.8	78.1
Clermont	14.7	54.5	69.3
Columbiana	26.7	52.8	79.4
Coshocton	25.9	53.7	79.5
Gallia	22.5	53.0	75.6
Guernsey	27.0	53.8	80.8
Harrison	31.8	51.5	83.3
Highland	27.4	55.2	82.6
Hocking	23.3	51.9	75.3
Holmes	21.4	77.6	99.0
Jackson	25.2	54.9	80.2
Jefferson	30.6	47.5	78.1
Lawrence	23.5	53.4	77.0
Meigs	27.2	53.8	81.0
Monroe	27.9	50.9	78.9
Morgan	27.9	57.9	85.8
Muskingum	24.6	53.2	77.8
Noble	28.1	59.0	87.1
Perry	23.4	57.7	81.1
Pike	24.7	57.5	82.2
Ross	20.6	46.1	66.7
Scioto	26.8	53.7	80.6
Tuscarawas	26.5	51.4	77.9
Vinton	24.9	56.3	81.2
Washington	23.7	50.0	73.8

Source: Sam Crawford, Ohio Appalachian Counties, (Jackson: Cooperative Extension Service, Ohio State University, 1992), 5-8.

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[a] The Aged Dependency Ratio is calculated by dividing the population of 65+ years by the population 20-64 years then multiplying by 100.

[b] The Youth Dependency Ratio is calculated by dividing the population of 0-19 years by the population 20-64 years then multiplying by 100.

[c] The Total Dependency Ratio is the sum of the Youth Dependency Ratio and the Aged Dependency Ratio.

TABLE V.9
POPULATION PROJECTIONS FOR OHIO APPALACHIA TO 2010 BY AGE GROUP

REGION AND AGE GROUP	POPULATION 1990 (ACTUAL)	POPULATION 2000 (PROJECTED)	POPULATION 2010 (PROJECTED)
Ohio:			
0-19	3,141,025	2,786,639	2,480,974
20-34	2,590,325	2,204,463	2,077,831
35-64	3,708,804	4,213,748	4,456,186
65+	1,406,961	1,328,237	1,383,345
Total	10,847,115	10,533,087	10,398,336
Appalachia:			
0-19	410,764	390,885	354,068
20-34	304,520	273,314	259,598
35-64	470,035	551,286	574,910
65+	187,574	180,036	190,825
Total	1,372,883	1,395,521	1,379,401
Appalachia (exc. Clermont):			
0-19	362,361	339,337	303,777
20-34	266,750	242,497	223,451
35-64	419,072	485,212	502,586
65+	174,523	165,311	172,624
Total	1,222,696	1,232,357	1,202,438
Adams:			
0-19	8,124	7,010	6,208
20-34	5,340	4,805	4,159
35-64	8,472	9,999	10,352
65+	3,435	3,441	3,903
Total	25,371	25,255	24,622
Athens:			
0-19	17,847	16,140	14,089
20-34	20,057	12,989	13,995
35-64	15,802	25,741	27,578
65+	5,843	5,900	6,832
Total	53,549	60,770	62,494
Belmont:			
0-19	18,708	18,458	15,178
20-34	13,692	14,541	13,057
35-64	25,348	31,675	32,740
65+	13,326	11,438	10,793
Total	71,074	76,112	71,768
Brown:			
0-19	11,027	11,988	12,062
20-34	7,787	7,299	7,451
35-64	11,682	14,995	16,482
65+	4,470	4,473	5,251
Total	34,966	38,755	41,246
Carroll:			
0-19	8,009	8,368	8,183
20-34	5,544	6,324	5,828
35-64	9,347	12,775	14,138
65+	3,621	3,521	4,138
Total	26,521	30,968	32,287

Source: Ohio Data User's Center. Projected Population: Ohio. (Columbus: Ohio Data User's Center, Ohio Department of Development, 1985).

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TABLE V.9 (cont.)
POPULATION PROJECTIONS FOR OHIO APPALACHIA TO 2010 BY AGE GROUP

REGION AND AGE GROUP	POPULATION 1990 (ACTUAL)	POPULATION 2000 (PROJECTED)	POPULATION 2010 (PROJECTED)
Clermont:			
0-19	48,403	51,548	50,291
20-34	37,770	30,817	36,147
35-64	50,963	66,074	72,324
65+	13,051	14,725	18,201
Total	150,187	163,164	176,963
Columbiana:			
0-19	31,846	26,803	23,661
20-34	22,288	19,721	17,297
35-64	38,051	42,919	43,159
65+	16,091	15,256	15,300
Total	108,276	104,699	99,417
Coshocton:			
0-19	10,592	10,624	9,720
20-34	7,274	6,880	6,906
35-64	12,457	14,666	15,273
65+	5,104	4,961	5,1983
Total	35,427	37,131	37,097
Gallia:			
0-19	9,347	8,471	7,693
20-34	6,928	5,748	5,589
35-64	10,704	9,742	9,121
65+	3,975	5,041	5,779
Total	30,954	29,002	28,182
Guernsey:			
0-19	11,606	11,526	10,251
20-34	8,094	6,977	6,840
35-64	13,496	15,074	15,075
65+	5,828	5,387	5,367
Total	39,024	38,964	37,533
Harrison:			
0-19	4,518	3,048	2,277
20-34	3,067	2,203	1,817
35-64	5,710	4,300	3,800
65+	2,790	2,208	1,942
Total	16,085	11,759	9,836
Highland:			
0-19	10,800	10,031	9,468
20-34	7,487	6,678	6,181
35-64	12,084	13,789	14,425
65+	5,357	5,323	5,680
Total	35,728	35,821	35,754
Hocking:			
0-19	7,565	6,997	6,350
20-34	5,481	4,928	4,521
35-64	9,087	10,215	10,607
65+	3,400	3,199	3,536
Total	25,523	25,339	25,014

Source: Ohio Data User's Center, Projected Population: Ohio (Columbus: Ohio Data User's Center, Ohio Department of Development, 1985).

TABLE V.9 (cont.)
POPULATION PROJECTIONS FOR OHIO APPALACHIA TO 2010 BY AGE GROUP

REGION AND AGE GROUP	POPULATION 1990 (ACTUAL)	POPULATION 2000 (PROJECTED)	POPULATION 2010 (PROJECTED)
Holmes:			
0-19	12,812	11,421	10,659
20-34	7,090	6,364	6,613
35-64	9,417	9,267	9,520
65+	3,530	4,682	5,492
Total	32,849	31,734	32,284
Jackson:			
0-19	9,219	7,331	6,181
20-34	6,452	4,719	4,045
35-64	10,327	10,504	10,049
65+	4,232	4,244	4,278
Total	30,230	26,798	24,553
Jefferson:			
0-19	21,413	18,645	15,644
20-34	15,457	14,308	11,922
35-64	29,619	30,299	29,773
65+	13,809	11,872	10,679
Total	80,298	75,124	68,018
Lawrence:			
0-19	18,675	15,120	12,930
20-34	13,005	10,831	9,356
35-64	21,936	24,258	23,942
65+	8,218	8,099	8,717
Total	61,834	58,308	54,945
Meigs:			
0-19	6,834	6,267	5,238
20-34	4,629	4,124	3,833
35-64	8,074	9,026	8,866
65+	3,450	3,166	3,250
Total	22,987	22,583	21,187
Monroe:			
0-19	4,413	3,826	3,157
20-34	3,003	2,154	2,075
35-64	5,661	5,490	4,882
65+	2,420	1,837	1,974
Total	15,497	13,307	12,088
Morgan:			
0-19	4,422	4,092	3,758
20-34	2,872	2,383	2,354
35-64	4,767	4,881	4,801
65+	2,133	1,997	2,001
Total	14,194	13,353	12,914
Muskingum:			
0-19	24,570	23,416	21,048
20-34	18,473	17,801	15,659
35-64	27,672	32,580	34,525
65+	11,353	11,156	11,624
Total	82,068	84,593	82,856

Source: Ohio Data User's Center, Projected Population: Ohio (Columbus: Ohio Data User's Center, Ohio Department of Development, 1985).

TABLE V.9 (cont.)
POPULATION PROJECTIONS FOR OHIO APPALACHIA TO 2010 BY AGE GROUP

REGION AND AGE GROUP	POPULATION 1990 (ACTUAL)	POPULATION 2000 (PROJECTED)	POPULATION 2010 (PROJECTED)
Noble:			
0-19	3,573	3,839	3,706
20-34	2,346	1,849	2,081
35-64	3,713	3,841	3,780
65+	1,704	1,432	1,377
Total	11,336	10,961	10,944
Perry:			
0-19	10,048	10,307	9,590
20-34	7,090	6,725	6,448
35-64	10,338	12,730	13,771
65+	4,081	3,735	3,991
Total	31,557	33,497	33,800
Pike:			
0-19	7,651	7,282	6,539
20-34	5,274	4,955	4,437
35-64	8,034	11,092	11,621
65+	3,290	3,830	4,614
Total	24,249	27,159	27,211
Ross:			
0-19	19,163	20,362	18,289
20-34	17,049	19,276	16,727
35-64	24,548	26,759	32,037
65+	8,570	8,491	9,426
Total	69,330	74,888	76,479
Scioto:			
0-19	23,906	22,507	20,088
20-34	17,242	15,383	13,312
35-64	27,237	32,249	32,412
65+	11,942	11,634	11,703
Total	80,327	81,773	77,515
Tuscarawas:			
0-19	24,298	23,163	20,261
20-34	17,807	15,888	15,449
35-64	29,461	34,503	35,439
65+	12,524	11,914	12,268
Total	84,090	85,468	83,417
Vinton:			
0-19	3,449	2,945	2,519
20-34	2,355	2,032	1,654
35-64	3,769	4,343	4,259
65+	1,525	1,509	1,633
Total	11,098	10,829	10,065
Washington:			
0-19	17,926	19,350	19,030
20-34	13,567	14,612	13,845
35-64	22,259	25,022	26,876
65+	8,502	8,043	9,161
Total	62,254	67,027	68,912

Source: Ohio Data User's Center, Projected Population: Ohio (Columbus: Ohio Data User's Center, Ohio Department of Development, 1985).

TABLE V.10
HOUSEHOLD CHARACTERISTICS OF OHIO APPALACHIA

REGION	TOTAL HOUSEHOLDS 1990	% MARRIED COUPLES 1990	% FEMALE HEADED 1990
Ohio	4,087,546	56.1	16.5
Appalachia	504,542	61.1	13.4
Appalachia (exc. Clermont)	451,816	61.0	13.4
Adams	9,192	62.4	14.6
Athens	20,139	25.2	15.9
Belmont	28,161	58.3	15.0
Brown	12,379	65.5	12.2
Carroll	9,667	66.2	9.9
Clermont	52,726	65.4	12.7
Columbiana	40,775	61.5	13.8
Coshocton	13,433	62.3	11.8
Gallia	11,367	62.1	13.6
Guernsey	14,894	58.0	15.7
Harrison	6,111	62.8	12.1
Highland	13,230	62.5	13.3
Hocking	9,351	63.5	12.0
Holmes	9,315	73.9	7.4
Jackson	11,260	60.0	15.6
Jefferson	31,311	57.4	16.2
Lawrence	22,899	61.4	15.9
Meigs	8,662	61.6	13.5
Monroe	5,754	66.1	10.5
Morgan	5,170	63.7	12.5
Muskingum	30,753	58.5	15.8
Noble	4,137	65.2	10.1
Perry	11,264	63.6	13.2
Pike	8,805	60.1	16.2
Ross	24,325	60.0	15.1
Scioto	29,786	57.0	17.7
Tuscarawas	31,971	62.5	11.6
Vinton	4,069	63.5	12.0
Washington	23,636	61.8	12.5

Source: CEOGC, Table 12.

TABLE V.11
AVERAGE WEEKLY WAGES OF ONE-DIGIT SIC INDUSTRIAL GROUPS IN 1990

INDUSTRY	AVERAGE WEEKLY WAGE ($)	RANK
Agriculture, forestry, and fishing	271	2
Mining	714	9
Construction	503	4
Manufacturing	555	5
Transportation and public utilities	578	7
Wholesale trade	578	7
Retail trade	244	1
Finance, insurance, and real estate	571	6
Services	423	3

Source: Bureau of Labor Statistics, Employment and Wage Annual Averages, 1990, Bulletin 2393. (Washington, DC: U.S. Department of Labor, Bureau of Labor Statistics, November 1991).

TABLE V.12
AVERAGE WEEKLY WAGES OF TWO-DIGIT SIC INDUSTRIAL GROUPS IN 1990

WAGE GROUP I
(<$299)

INDUSTRY	SIC CODE	AVERAGE WEEKLY WAGE
Eating and drinking places	5800	160
Private households	8800	179
Apparel and accessory stores	5600	226
Personal services	7200	241
General merchandise stores	5300	242
Agricultural production, crops	100	247
Hotels and other lodging places	7000	251
Food stores	5400	251
Social services	8300	252
Agricultural services	700	272
Miscellaneous retail stores	5900	278
Local and interurban passenger transit	4100	282
Apparel and other textile products	2300	295
Amusement and recreation services	7900	297
Lumber and wood products	2400	298

WAGE GROUP II
($300-$449)

INDUSTRY	SIC CODE	AVERAGE WEEKLY WAGE
Membership organizations	8600	303
Agricultural production, livestock	200	313
Museums, and botanical and zoological gardens	8400	314
Leather and leather products	3100	336
Building materials and garden supplies	5200	340
Forestry	800	344
Auto repair, services, and parking	7500	353
Furniture and homefurnishings stores	5700	358
Business services	7300	375
Textile mill products	2200	376
Automotive dealers and service stations	5500	393
Furniture and fixtures	2500	394
Educational services	8200	404
Real estate	6500	423
Railroad transportation	4000	429
Miscellaneous repair services	7600	432
Miscellaneous manufacturing industries	3900	435
Motion pictures	7800	439

Source: Bureau of Labor Statistics, Employment and Wage Annual Averages, 1990, Bulletin 2393 (Washington, DC: U.S. Department of Labor, Bureau of Labor Statistics, November 1991).

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TABLE V.12 (cont.)
AVERAGE WEEKLY WAGES OF TWO-DIGIT SIC INDUSTRIAL GROUPS IN 1990

WAGE GROUP III
($450-$599)

INDUSTRY	SIC CODE	AVERAGE WEEKLY WAGE
Transportation services	4700	453
Trucking and warehousing	4200	463
Food and kindred products	2000	471
Rubber and miscellaneous plastics products	3000	475
Special trade contractors	1700	481
Depository institutions	6000	482
Health services	8000	484
Printing and publishing	2700	507
General building contractors	1500	511
Fabricated metal products	3400	527
Stone, clay, and glass products	3200	530
Wholesale trade, nondurable goods	5100	534
Insurance agents, brokers and service	6400	573
Heavy construction, except building	1600	575
Nonmetallic minerals, except fuels	1400	575
Electronic and other electrical equipment	3600	578
Insurance carriers	6300	594

WAGE GROUP IV
($600-$749)

INDUSTRY	SIC CODE	AVERAGE WEEKLY WAGE
Nondepository institutions	6100	600
Water transportation	4400	601
Fishing, hunting, and trapping	900	605
Wholesale trade, durable goods	5000	608
Paper and allied products	2600	627
Transportation by air	4500	630
Industrial machinery and equipment	3500	634
Primary metal industries	3300	635
Instruments and related products	3800	668
Engineering and management services	8700	670
Communications	4800	675
Transportation equipment	3700	710
Metal mining	1000	715
Oil and gas extraction	1300	736
Electric, gas, and sanitary services	4900	739

Source: Bureau of Labor Statistics, Employment and Wage Annual Averages, 1990, Bulletin 2393 (Washington, DC: U.S. Department of Labor, Bureau of Labor Statistics, November 1991).

TABLE V.12 (cont.)
AVERAGE WEEKLY WAGES OF TWO-DIGIT SIC INDUSTRIAL GROUPS IN 1990

WAGE GROUP V
(>$750)

INDUSTRY	SIC CODE	AVERAGE WEEKLY WAGE
Chemicals and allied products	2800	762
Coal mining	1200	763
Legal services	8100	769
Tobacco products	2100	770
Petroluem and coal products	2900	820
Services, n.e.c.	8900	858
Pipelines, except natural gas	4600	860
Holding and other investment offices	6700	913
Security and commodity brokers	6200	1240

Source: Bureau of Labor Statistics, Employment and Wage Annual Averages, 1990, Bulletin 2393 (Washington, DC: U.S. Department of Labor, Bureau of Labor Statistics, November 1991).

APPENDIX IV
SCHOOLS AND COLLEGES SURVEYED

SCHOOL DISTRICTS SURVEYED

COUNTY	SCHOOL DISTRICT
Athens	Federal Hocking Local
	Tri-County Joint Vocational School
Belmont	Barnesville Exempted Village
	Union Local
Coshocton	Ridgewood Local
	River View Local
Guernsey	Rolling Hills Local
Jefferson	Indian Creek Local
Lawrence	Ironton City
	Dawson-Bryant Local
Meigs	Eastern Local
	Meigs Local
Muskingum	East Muskingum Local
	Maysville Local
Pike	Eastern Local
	Scioto Valley Local
Ross	Zane Trace Local
Scioto	Bloom-Vernon Local
	Northwest Local
	Washington Local
Vinton	Vinton County Local

COLLEGES SURVEYED FOR NONTRADITIONAL STUDENTS

1) Belmont Technical College
2) Hocking Technical College
3) Jefferson Technical College
4) Kent State University - Salem Campus
5) Kent State University - East Liverpool Campus
6) Muskingum Technical College
7) Ohio University - Athens
8) Ohio University - Ironton Campus
9) Southern State Community College

HIGH SCHOOL SENIOR SURVEY

HIGH SCHOOL SENIOR SURVEY

This survey is part of a project funded by the Ohio Board of Regents, in cooperation with several colleges and universities in Appalachian Ohio.

Participation in this survey is voluntary. Students are not required to complete any part of the following document. The results of the survey will be used to help gather information regarding a school, a county, and a twenty-nine county region. The results will not be used in any way to reflect on an individual student or family.

PLEASE NOTE THE FOLLOWING DEFINITION BEFORE COMPLETING THE SURVEY:
Higher education or college means a four-year college, a two-year college, a technical college, a community college, or a branch of a college.

PLEASE PRINT ALL ANSWERS!

1. Name of high school ________________ 2. County __________

3. Age ______ 4. Sex: ____ male ____ female

5. Race (check one)
   - ____ White
   - ____ Black
   - ____ American Indian/Eskimo
   - ____ Spanish
   - ____ Asian/Pacific Islander

6. With how many natural parents do you live? ____two ____one ____none

7. Your parents are (check one)
   - ____ married
   - ____ divorced
   - ____ separated
   - ____ never married
   - ____ one or both deceased
   - ____ other (specify ____________________)

8. How many brothers and sisters do you have? ______

9. Estimate your family's income for last year (1990) $________

10. Does your family receive welfare or some form of public assistance (Food Stamps, AFDC, General Relief, Social Security)? (check one)
    ____ yes ____ no ____ unsure

11. Do you want to live in this area most of your life?
    ____ yes ____ no ____ unsure

12. Do you think you will live in this area most of your life?
    ____ yes ____ no ____ unsure

13. Father's occupation __________ 14. Mother's occupation __________

15. What is your high school grade point average (GPA)?
    - ____ 3.5 - 4.0 (B+/A)
    - ____ 3.0 - 3.4 (B)
    - ____ 2.5 - 2.9 (C+)
    - ____ 2.0 - 2.4 (C)
    - ____ 1.5 - 1.9 (D+)
    - ____ 1.0 - 1.4 (D)
    - ____ 0 - 1.0 (F)

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16. What occupation/career do you plan to pursue? ______________________________

17. Does the occupation/career require some training beyond high school?
____yes ____no ____unsure

18. Number of brothers/sisters who are attending or have attended college_______.

19. Highest grade in school completed by your father (check one)
_____ less than 8th grade
_____ 8th grade
_____ 9th grade
_____ 10th grade
_____ 11th grade
_____ 12th grade
_____ 1-3 years college
_____ graduated from 2-year college
_____ graduated from 4-year college
_____ advanced degree (Master's, Ph.D.)
_____ don't know

20. Highest grade in school completed by your mother (check one)
_____ less than 8th grade
_____ 8th grade
_____ 9th grade
_____ 10th grade
_____ 11th grade
_____ 12th grade
_____ 1-3 years college
_____ graduated from 2-year college
_____ graduated from 4-year college
_____ advanced degree (Master's, Ph.D.)
_____ don't know

21. How would you rank your intelligence?
_____ above average _____average _____ below average

22. What do you plan to do within one year after high school? (check one)
_____ 4-year college
_____ 2-year college
_____ military
_____ employment
_____ unsure
_____ other (specify ____________________________________)

23. Are you educationally prepared for college? ____yes ____no ____unsure

24. Do you want to attend college? ____yes ____no ____unsure

25. Is either of your two closest friends planning to attend college?
____yes ____no ____unsure

26. Can you afford to go to college? ____yes ____no ____unsure

27. Have you visited a college within the last two years?
____yes ____no

28. Do you need to attend college to be financially secure?
____yes ____no ____unsure

29. What high school curriculum have you followed? (check one)
_____ college preparatory
_____ general
_____ vocational
_____ other (specify _________________________________)

30. When will you begin college? (check one)
_____ within 1 year after high school
_____ not sure
_____ after military
_____ after working 1-5 years
_____ no plans to attend

31. Do you plan to live with your parents at least a year after high school?
___yes ___no ___unsure

32. Do your parents want you to attend college? ___yes ___no ___unsure

33. What kind of job does your school do in encouraging students to pursue higher education? ____good ____fair ____poor ____unsure

34. What kind of job do area colleges do in encouraging students to pursue higher education? ____good ____fair ____poor ____unsure

35. Does your school provide you with sufficient information regarding college costs and financial aid? ___yes ___no ___unsure

36. Does your school provide you enough information regarding career choices and required training? ___yes ___no ___unsure

37. Is your school involved with area colleges in programs that encourage students to attend college? ___yes ___no ___unsure

38. Rank the three people who had the most influence on your decision to attend or not to attend college. (1=most influential; 2=second most influential; 3=third most influential)
____ peers/friends
____ parents
____ brother/sister
____ other relative
____ teachers
____ counselor
____ college representative
____ employer
____ other-(specify ______________________)

39. Have your parents encouraged you to pursue higher education?
___yes ___no ___unsure

40. Do you plan to attend college: ___full time ___part time ___not at all

41. Where will you attend college? (check one)
____ not attending
____ unsure
____ local college--within 50 miles
____ within Ohio--more than 50 miles
____ out of state
____ foreign country

42. When did you first discuss college with your parents? (check one)
____ grades 1-6
____ grades 7-8
____ grades 9-10
____ grades 11-12
____ never discussed

43. Have your parents saved money for your college education? (check one)
____ unsure
____ cannot save
____ saved for 1-2 years
____ saved 3-5 years
____ saved more than 5 years

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44. When did you decide your occupation/career? (check one)
_____ grades 1-6
_____ grades 7-8
_____ grades 9-10
_____ grades 11-12
_____ still undecided

45. How long will it take to reach your occupation/career goal? (check one)
_____ unsure
_____ less than 1 year
_____ 2-3 years
_____ 3-5 years
_____ more than 5 years

46. Are you planning to marry? (check one)
_____ no plans
_____ less than 1 year
_____ 1-2 years
_____ 3-5 years
_____ already married

47. Estimate the cost of one year of college if you were to live on campus at a four year college. $_______________

48. Estimate the cost of one year of college if you were to commute to a two-year college. $_______________

49. When were you made aware of college at your school? (check one)
_____ grades 1-3
_____ grades 4-6
_____ grades 7-8
_____ grades 9-10
_____ grades 11-12
_____ unsure

50. Did programs presented by area colleges influence your decision to attend or not attend college? ____yes ___no ____unsure

51. Rank the three major problems or difficulties you have encountered regarding college. (1=greatest problem; 2=second greatest; 3=third greatest)
_____ lack of information regarding college educational programs
_____ want an immediate income
_____ no friends planning to go to college
_____ live too far from a college
_____ lack of parent support
_____ lack of financial aid information
_____ other (specify ______________________________________)
_____ won't "fit in"
_____ not smart enough
_____ poor grades in school
_____ don't like school
_____ lack of finances

52. Rank the three most important factors you consider when selecting a college. (1 = most important; 2 = second most important; 3 = third most important)
_____ financial aid available
_____ college's reputation
_____ friends/relatives attending
_____ not planning to attend
_____ other (specify ______________________________________)
_____ location
_____ programs offered
_____ size of college

53. IF YOU PLAN TO ATTEND COLLEGE, COMPLETE THE FOLLOWING:
Indicate the percentage of your college expenses to be covered by each category. Place a "0" by each category which will not be used to pay your college expenses.

_____% own income or savings
_____% parents
_____% loan
_____% grant
_____% scholarship
_____% employer assisted
_____% other (specify ______________________________)
100% TOTAL

54. If you have decided to attend college next year, how important to you was each of the following reasons? (mark one answer for each line)

Very Important	Somewhat Important	Not Important	
___	___	___	to be able to get a better job
___	___	___	to gain a general education and appreciation of ideas
___	___	___	to improve my reading and study skills
___	___	___	there is nothing better to do
___	___	___	to make me a more cultured person
___	___	___	to be able to make more money
___	___	___	to learn more about things that interest me
___	___	___	to prepare myself for graduate or professional school
___	___	___	my parents want me to go to college
___	___	___	I cannot find a job
___	___	___	I want to get away from home

55. If you have decided not to attend college next year, how important to you is each of the following reasons? (mark one answer for each line)

Very Important	Somewhat Important	Not Important	
___	___	___	I don't need college to get a good job
___	___	___	I have enough education
___	___	___	I have enough culture
___	___	___	I will make enough money without going to college
___	___	___	colleges have nothing that interest me
___	___	___	my parents don't want me to go to college
___	___	___	I want to live at home
___	___	___	I want to get away from home
___	___	___	I can't afford to attend college
___	___	___	I am not smart enough to go to college

56. List any recommendation(s) to schools or colleges for helping people participate in higher education.

____

____

____

PARENT SURVEY

This survey is part of a project funded by the Ohio Board of Regents, in cooperation with several colleges and universities in Appalachian Ohio.

Participation in this survey is voluntary. You are not required to complete any part of the following document. By completing the survey, you will help gather information regarding a twenty-nine county region. The results will not be used in any way to reflect on an individual or family.

PLEASE NOTE THE FOLLOWING DEFINITION BEFORE COMPLETING THE SURVEY:
Higher education or college means a four-year college, a two-year college, a technical college, a community college, or a branch of a college.

PLEASE PRINT ALL ANSWERS!

1. Name of high school your senior attends ____________________

2. County ____________ 3. Your age ____ 4. Your sex: __male __female

5. Your race (check one)
   ____ White
   ____ Black
   ____ American Indian/Eskimo
   ____ Spanish
   ____ Asian/Pacific Islander

6. You are (check one)
   ____ married
   ____ divorced
   ____ separated
   ____ never married
   ____ other (specify ____________________)

7. How many brothers and/or sisters does your senior have? ________

8. Estimate your family income for last year (1990) $__________

9. Do you receive welfare or some form of public assistance (Food Stamps, AFDC, General Relief, Social Security)? __yes __no __unsure

10. How many years have you lived in this area? ________

11. Highest grade in school you completed (check one)
    ____ less than 8th grade
    ____ 8th grade
    ____ 9th grade
    ____ 10th grade
    ____ 11th grade
    ____ 12th grade
    ____ 1-3 years of college
    ____ graduated from 2-year college
    ____ graduated from 4-year college
    ____ advanced degree (Master's, Ph.D.)

12. Highest grade in school completed by your spouse: (check one)
    ____ less than 8th grade
    ____ 8th grade
    ____ 9th grade
    ____ 10th grade
    ____ 11th grade
    ____ 12th grade
    ____ 1-3 years of college
    ____ graduated from 2-year college
    ____ graduated from 4-year college
    ____ advanced degree (Master's, Ph.D.)

13. Your occupation_________________ 14. Spouse's occupation_________________

15. What is your senior's high school grade point average (GPA)?
_____ 3.5 - 4.0 (B+/A)
_____ 3.0 - 3.4 (B)
_____ 2.5 - 2.9 (C+)
_____ 2.0 - 2.4 (C)
_____ 1.5 - 1.9 (D+)
_____ 1.0 - 1.4 (D)
_____ 0 - 1.0 (F)

16. Your senior's gender? _____ male _____ female

17. Does your senior want to live in this area most of his/her life?
___yes ___no ___unsure

18. Do you think your senior will live in this area most of his/her life?
___yes ___no ___unsure

19. What occupation/career does your senior plan to pursue?__________________

20. Does the occupation/career in question 19 require some training beyond high school? ___yes ___no ___unsure

21. Number of your children who are attending or who have attended college_____

22. What does your senior plan to do within one year after high school (check one)?
_____ 4-year college
_____ 2-year college
_____ military
_____ employment
_____ unsure
_____ other (specify ________________________________)

23. Is your senior educationally prepared for college? ___yes ___no ___unsure

24. Does your senior want to attend college? ___yes ___no ___unsure

25. Can your senior afford to go to college? ___yes ___no ___unsure

26. Has your senior visited a college within the last two years?
___yes ___no ___unsure

27. Does your senior need to attend college to be financially secure?
___yes ___no ___unsure

28. What high school curriculum has your senior followed? (check one)
_____ general
_____ college preparatory
_____ vocational
_____ other (specify ________________________________.)

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29. When will your senior begin college?
    _____ within 1 year after high school
    _____ after military
    _____ after working 1-5 years
    _____ unsure
    _____ no plans to attend

30. Will your senior live with you at least a year after high school?
    ___yes ___no ___unsure

31. Do you want your senior to attend college? ___yes ___no ___unsure

32. What kind of job does your school do in encouraging students to pursue higher education? _____ good _____ fair _____ poor _____ unsure

33. What kind of job do area colleges do in encouraging students to pursue higher education? _____ good _____ fair _____ poor _____ unsure

34. Does the school provide sufficient information regarding college costs and financial aid? ___yes ___no ___unsure

35. Does the school provide sufficient information regarding career choices and required training? ___yes ___no ___unsure

36. Is the school involved with area colleges in programs that encourage students to attend college? ___yes ___no ___unsure

37. Have you encouraged your senior to pursue higher education? ___ yes ___ no

38. Will your senior attend college: ____full time ___part time ___not at all

39. Your senior will:
    _____ attend local college--within 50 miles
    _____ attend Ohio college--more than 50 miles
    _____ attend out of state college
    _____ attend college in foreign country
    _____ not attend college

40. When did you first discuss college with your senior?
    _____ grades 1-6
    _____ grades 7-8
    _____ grades 9-10
    _____ grades 11-12
    _____ never discussed

41. Have you saved money for your senior's college costs?
    _____ cannot save
    _____ saved for 1-2 years
    _____ saved for 3-5 years
    _____ saved more than 5 years

42. Estimate the cost of one year of college if your senior lives on campus at a four-year college $__________________

43. Estimate the cost of one year of college at a two-year college if your senior does not live on campus $__________________

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44. Rank the three major problems or difficulties your senior has encountered regarding college. (1=greatest problem; 2=second greatest; 3=third greatest)

_____ lack of information regarding college educational programs
_____ wants an immediate income
_____ lack of financial aid information
_____ no friends planning to attend college
_____ live too far from college
_____ lack of parent encouragement
_____ other (specify ____________________________)
_____ lack of finances
_____ doesn't like school
_____ not smart enough
_____ won't "fit in"
_____ poor grades in school

45. Rank the three most important factors in helping your senior select a college. (1 = most important; 2 = second most important; 3 = third most important)

_____ financial aid available
_____ programs offered
_____ friends/relatives attending
_____ not planning to attend
_____ other (specify ____________________________)
_____ location
_____ college's reputation
_____ size of college

46. IF YOUR SENIOR PLANS TO ATTEND COLLEGE, COMPLETE THIS QUESTION:
Indicate the percentage of your senior's college expenses to be covered by each category. Place a "0" by each category which will not be used to pay college expenses.

_____% student's own income/savings
_____% parents
_____% loan
_____% grant
_____% scholarship
_____% employer assisted
_____% other (specify ____________________________)
100% TOTAL

47. Following are several statements related to higher education. Please mark the importance of each statement in deciding whether or not your senior will attend college.

Very Important	Somewhat Important	Not Important	
___	___	___	attending college will enable my child to get a better job
___	___	___	attending college will enable my child to be more cultured
___	___	___	attending college will enable my child to make more money
___	___	___	attending college will enable my child to have a better adult social life
___	___	___	attending college will enable my child to gain a general education and an appreciation of ideas
___	___	___	attending college will enable my child to learn more about things that interest him/her
___	___	___	attending college will enable my child to have a better life

48. List any recommendation(s) to schools or colleges for helping people participate in higher education.

____

____

____

SCHOOL PERSONNEL SURVEY

SCHOOL PERSONNEL SURVEY

This survey is part of a project funded by the Ohio Board of Regents, in cooperation with several colleges and universities in Appalachian Ohio.

Participation in this survey is voluntary. School personnel are not required to complete any part of the following document. By completing the survey, you will help gather information for a twenty-nine county region of Ohio. The results will not be used in any way to reflect on individual school personnel.

PLEASE NOTE THE FOLLOWING DEFINITION BEFORE COMPLETING THE SURVEY:
Higher education or college means a four-year college, a two-year college, a technical college, a community college, or a branch of a college.

PLEASE PRINT ALL ANSWERS!

1. School____

2. District__________________________ 3. County_____________________

4. Present position
    _____ counselor
    _____ principal
    _____ teacher
    _____ superintendent
    _____ other (specify ________________________________)

5. Years experience, including this year, in each of the following positions:
    _____ teacher
    _____ counselor
    _____ principal
    _____ superintendent

6. What kind of job does your school do in encouraging students to pursue higher education? _____good _____fair _____poor _____unsure

7. What kind of job do area colleges do in encouraging students to pursue higher education? _____good _____fair _____poor _____unsure

8. Does your school provide students with sufficient information regarding college costs and financial aid? ___yes ___no ___unsure

9. Do area colleges provide your school with sufficient information regarding college costs/financial aid? ___yes ___no ___unsure

10. Does your school provide students enough information regarding career choices and training requirements for careers? ___yes ___no ___unsure

11. Do area colleges provide your school with enough information regarding college requirements and expectations of students? ___yes ___no ___unsure

12. Estimate the percent of students who graduate from your school who are educationally prepared for higher education ________ %

13. Estimate the percent of parents in your district who encourage their children to pursue higher education ________ %

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14. Rank the three people who have the most influence on a student's decision to attend or not attend college. (1=most influential; 2=second most influential; 3=third most influential)
_____ peers
_____ brother/sister
_____ teachers
_____ employer
_____ other (specify ____)
_____ parents
_____ other relative
_____ counselor
_____ college representative

15. Is your school actively involved in programs, other than recruitment, with area colleges which encourage students to pursue higher education?
___yes ___no ___unsure

16. Estimate the percent of students whose decision to attend or not to attend college is influenced by college recruitment efforts _________ %

17. Estimate the percent of students from your school who have the ability to succeed in higher education _________ %

18. Rank the three major difficulties students in your district encounter regarding college. (1=greatest difficulty; 2=second greatest difficulty; 3=third greatest difficulty)
_____ lack of information regarding college educational programs
_____ lack of financial aid information
_____ poor self image
_____ peers not attending college
_____ poor grades in school
_____ not smart enough
_____ other (specify ____)
_____ lack of finances
_____ live too far from college
_____ lack of parent support
_____ wants an immediate income
_____ don't see need for college

19. Estimate the percent of your time spent informing students of higher education. ________ %

20. Estimate the percent of students from your district who should pursue higher education. ________ %

21. Do you believe it is your responsibility to encourage students to pursue higher education?
___yes ___no ___unsure

22. Do you think your attitude influences student interest in higher education?
___yes ___no ___unsure

23. Do you attempt to raise student interest in higher education?
___yes ___no ___unsure

24. How do you attempt to raise student interest in higher education?
____
____

25. How do you introduce the concept of higher education to students?
____
____

26. List any recommendation(s) to colleges or schools for helping area residents and/or students participate in higher education______________________________
____

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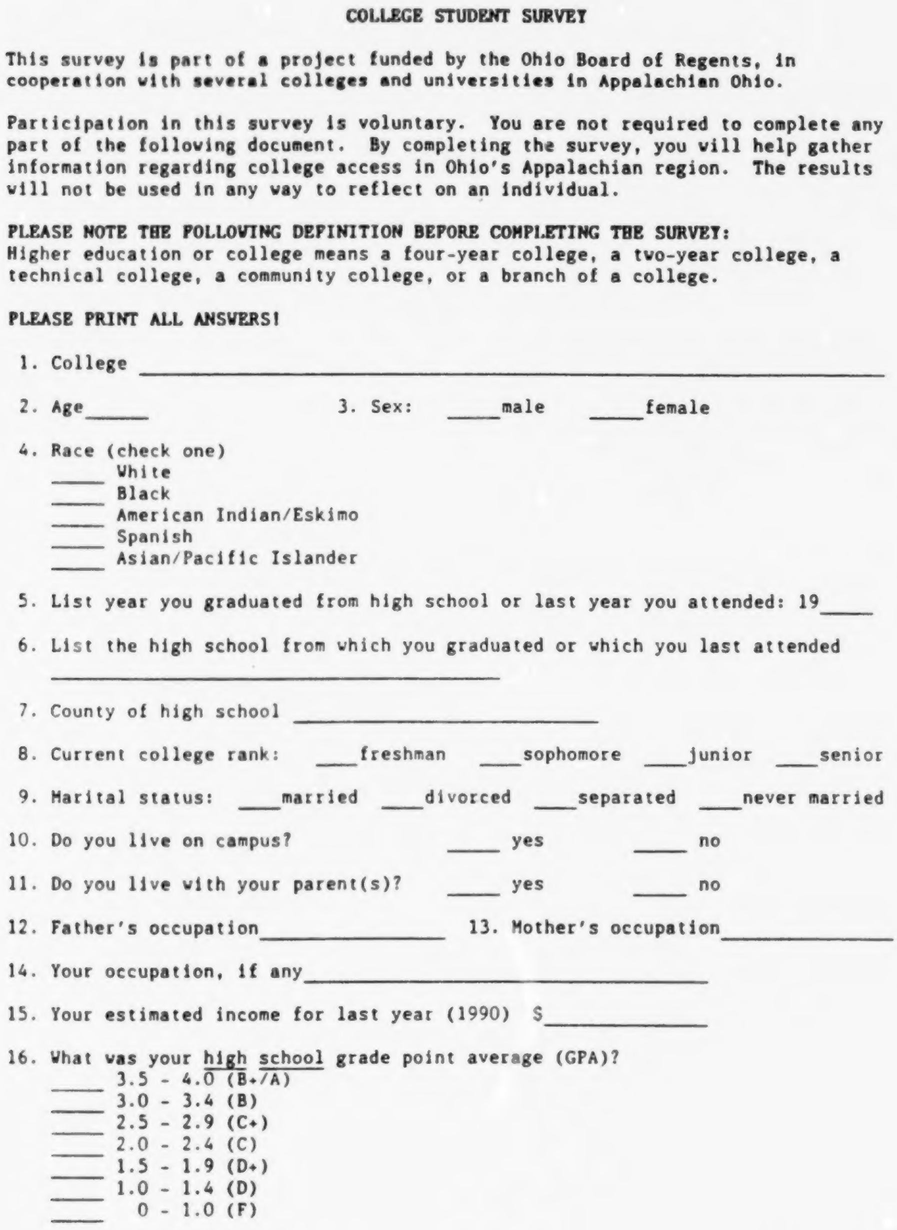
COLLEGE STUDENT SURVEY



COLLEGE STUDENT SURVEY

This survey is part of a project funded by the Ohio Board of Regents, in cooperation with several colleges and universities in Appalachian Ohio.

Participation in this survey is voluntary. You are not required to complete any part of the following document. By completing the survey, you will help gather information regarding college access in Ohio's Appalachian region. The results will not be used in any way to reflect on an individual.

PLEASE NOTE THE FOLLOWING DEFINITION BEFORE COMPLETING THE SURVEY:
Higher education or college means a four-year college, a two-year college, a technical college, a community college, or a branch of a college.

PLEASE PRINT ALL ANSWERS!

1. College ____

2. Age_____ 3. Sex: _____male _____female

4. Race (check one)
   _____ White
   _____ Black
   _____ American Indian/Eskimo
   _____ Spanish
   _____ Asian/Pacific Islander

5. List year you graduated from high school or last year you attended: 19____

6. List the high school from which you graduated or which you last attended
   ____

7. County of high school ____________________

8. Current college rank: ___freshman ___sophomore ___junior ___senior

9. Marital status: ___married ___divorced ___separated ___never married

10. Do you live on campus? _____ yes _____ no

11. Do you live with your parent(s)? _____ yes _____ no

12. Father's occupation______________ 13. Mother's occupation______________

14. Your occupation, if any______________________________

15. Your estimated income for last year (1990) $____________

16. What was your high school grade point average (GPA)?
    _____ 3.5 - 4.0 (B+/A)
    _____ 3.0 - 3.4 (B)
    _____ 2.5 - 2.9 (C+)
    _____ 2.0 - 2.4 (C)
    _____ 1.5 - 1.9 (D+)
    _____ 1.0 - 1.4 (D)
    _____ 0 - 1.0 (F)

17. Estimate your college GPA.
_____ 3.5 - 4.0 (B+/A)
_____ 3.0 - 3.4 (B)
_____ 2.5 - 2.9 (C+)
_____ 2.0 - 2.4 (C)
_____ 1.5 - 1.9 (D+)
_____ 1.0 - 1.4 (D)
_____ 0 - 1.0 (F)

18. Do you want to live most of your life in this area? ___yes ___no ___unsure

19. Do you think you will live most of your life in this area? ___yes ___no ___unsure

20. Highest grade in school completed by your father (check one)
_____ less than 8th grade
_____ 8th grade
_____ 9th grade
_____ 10th grade
_____ 11th grade
_____ 12th grade
_____ 1-3 years college
_____ graduated from 2-year college
_____ graduated from 4-year college
_____ advanced degree (Master's, Ph.D.)
_____ don't know

21. Highest grade in school completed by your mother (check one)
_____ less than 8th grade
_____ 8th grade
_____ 9th grade
_____ 10th grade
_____ 11th grade
_____ 12th grade
_____ 1-3 years college
_____ graduated from 2-year college
_____ graduated from 4-year college
_____ advanced degree (Master's, Ph.D.)
_____ don't know

22. Number of brothers/sisters who are attending or have attended college_______

23. What occupation/career do you plan to pursue?______________________________

24. What high school curriculum did you follow? (check one)
_____ college preparatory
_____ general
_____ vocational
_____ other (specify ___________________________________)

25. What kind of job did your high school do in encouraging students to pursue higher education? _____good _____fair _____poor _____unsure

26. What did you do within the first year after high school?
_____ military
_____ entered 4-year college
_____ entered 2-year college
_____ employment
_____ other (specify ___________________________________)

27. Did your parents encourage you to attend college? ___yes ___no ___unsure

28. Did your parents save money for your college expenses? (check one)
_____ could not save
_____ saved 1-2 years
_____ saved 3-5 years
_____ saved more than 5 years
_____ unsure

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29. Were you educationally prepared for college? ___yes ___no ___unsure

30. What kind of job did area colleges do in encouraging students to pursue higher education? _____good _____fair _____poor _____unsure

31. Did your high school provide sufficient information regarding college costs and financial aid? ___yes ___no ___unsure

32. Did your high school provide enough information regarding career choices and training requirements? ___yes ___no ___unsure

33. Are you attending college: _____full time _____part time

34. Rank the three people who had the most influence on your decision to attend college. (1= most influential; 2=second most influential; 3=third most influential)
_____ peers
_____ brother/sister
_____ teacher(s)
_____ college representative
_____ other (specify _________________________________)
_____ parents
_____ other relative
_____ counselor
_____ employer

35. When did you decide your occupation/career? (check one)
_____ grades 1-6
_____ grades 7-8
_____ grades 9-10
_____ grades 11-12
_____ after graduating high school
_____ still undecided

36. How long will it take to reach your occupation/career goal? (check one)
_____ unsure
_____ less than 1 year
_____ 2-3 years
_____ 3-5 years
_____ more than 5 years

37. Did programs presented by area colleges influence your decision to attend college? ___yes ___no ___unsure

38. Rank the three major problems you encountered in deciding to attend college. (1=greatest problem; 2=second greatest; 3=third greatest)
_____ lack of information regarding college educational programs
_____ lack of financial aid information
_____ no friends planning to attend college
_____ poor grades in high school
_____ live too far from college
_____ other (specify _________________________________)
_____ lack of money
_____ poor self image
_____ lack of ability
_____ lack of parent support

39. Rank the three most important factors you considered when selecting a college. (1=most important; 2=second most important; 3=third most important)
_____ financial aid available
_____ programs offered
_____ friends/relatives attending
_____ other (specify _________________________________)
_____ size of college
_____ college's reputation
_____ location

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40. Indicate the percentage of your college expenses that are covered by each of the following categories. Place a "0" by each category that is not used.

____ % own income or savings
____ % parents
____ % loan
____ % grant
____ % scholarship
____ % employer assisted
____ % other (specify ______________________)
100 % TOTAL

41. In deciding to go to college, how important to you was each of the following reasons? (mark one answer for each reason)

Very Important	Somewhat Important	Not Important	
___	___	___	to be able to get a better job
___	___	___	to gain a general education and appreciation of ideas
___	___	___	to improve my reading and study skills
___	___	___	there was nothing better to do
___	___	___	to make me a more cultured person
___	___	___	to be able to make more money
___	___	___	to learn more about things that interest me
___	___	___	to prepare myself for graduate or professional school
___	___	___	my parents wanted me to go
___	___	___	I could not find a job
___	___	___	wanted to get away from home

42. List any recommendation(s) to schools or colleges for helping people participate in higher education.

____

____

____

____

WASHINGTON STATE COMMUNITY COLLEGE

PROGRAM/ACTIVITY	Food Stamp Mailing
TARGET GROUP	Recipients of Food Stamps throughout the Service District Area
DATE INITIATED	1988
ANNUAL COST	Minimal--duplicating/copying
FUNDING SOURCE	College
RELATED PUBLICATIONS	
SUMMARY	Monthly mailing to all Food Stamp recipients in the SDA. Mailers include information regarding visitation days, financial aid, career opportunities, and placement.
COMMENTS	Very effective device for reaching economically disadvantaged residents.
CONTACT	Ann Hontz, Director of Student Development

WASHINGTON STATE COMMUNITY COLLEGE

PROGRAM/ACTIVITY	Customized Training for Business and Industry
TARGET GROUP	Any business or industry in the Service District Area
DATE INITIATED	
ANNUAL COST	No additional direct costs
FUNDING SOURCE	Covered by business and industry
RELATED PUBLICATIONS	Flyers detailing services available at WSCC

SUMMARY	WSCC personnel provide technical and academic training for employees of firms in the SDA.
COMMENTS	Good PR device. Responds to the needs of the community.
CONTACT	Susan Berry, Director of Business and Industry Training

WASHINGTON STATE COMMUNITY COLLEGE

PROGRAM/ACTIVITY	"To the Parents of" Brochure
TARGET GROUP	Parents of high school seniors who are not planning to attend college.
DATE INITIATED	1988
ANNUAL COST	
FUNDING SOURCE	
RELATED PUBLICATIONS	Brochure
SUMMARY	Brochure mailed to the parents of seniors with information directed to those students who have not yet applied to attend college. Emphasizes that it's not too late for college.
COMMENTS	
CONTACT	Kevin Conley, Director of Admissions

WASHINGTON STATE COMMUNITY COLLEGE

PROGRAM/ACTIVITY	Career Planning Outreach
TARGET GROUP	ABE classes, job clubs, high school juniors

DATE INITIATED	
ANNUAL COST	
FUNDING SOURCE	
RELATED PUBLICATIONS	News releases, telephone contacts
SUMMARY	The Career Planning Program is administered at no charge to specific groups: adult basic education classes, job clubs, undecided high school juniors. Follow-up activities are then scheduled.
COMMENTS	
CONTACT	Kevin Conley, Director of Admissions

OHIO UNIVERSITY

PROGRAM/ACTIVITY	Upward Bound
TARGET GROUP	High school students in 12-county region who meet federal income guidelines and are first generation college applicants.
DATE INITIATED	1965
ANNUAL COST	
FUNDING SOURCE	U.S. Department of Education, TRIO Programs
RELATED PUBLICATIONS	Applications, pamphlets
SUMMARY	High school sophomores are invited to participate in an intensive six-week summer academic program on the O.U. Athens campus for three summers, ending the summer following high school graduation. The summer program includes course work in reading, math, writing, chemistry, communication, and computer science. Enrichment activities continue monthly through the academic year.
COMMENTS	Student/teacher ratio is 6:1
CONTACT	Dr. Samuel Bolden, Assist. Dean, College of Education

OHIO UNIVERSITY

PROGRAM/ACTIVITY	OU START (Students Talking About Racial Tolerance)
TARGET GROUP	Entire Athens campus
DATE INITIATED	
ANNUAL COST	

FUNDING SOURCE	Office of Affirmative Action
RELATED PUBLICATIONS	Flyers, campus newspaper ads, classroom materials
SUMMARY	Students apply and are accepted on the basis of racial and gender balance. Affirmative Action staff and campus faculty conduct a two-quarter, credit-bearing course focused on understanding and improving racial harmony on campus.
COMMENTS	Provides forum for open, non-threatening discussion
CONTACT	Mary Trujillo, Affirmative Action

OHIO UNIVERSITY

PROGRAM/ACTIVITY	Freshman Involvement Study
TARGET GROUP	First-year undergraduate students
DATE INITIATED	1983
ANNUAL COST	
FUNDING SOURCE	Dean of Students Office, Residence Life, and Institutional Research Offices
RELATED PUBLICATIONS	Survey instrument
SUMMARY	Surveys are distributed the first week of spring quarter. Responses are the basis for identifying potential dropouts and corresponding intervention, which occurs one week before fall quarter pre-registration during that same spring quarter.
COMMENTS	Excellent retention tool; 83% retention rate for 1991-92
CONTACT	Joel Rudy, Dean of Students

OHIO UNIVERSITY

PROGRAM/ACTIVITY	Relocate Day
TARGET GROUP	Undergraduate students relocating to Athens campus from OU's five regional campuses in thirteen southeastern Ohio counties
DATE INITIATED	1977
ANNUAL COST	
FUNDING SOURCE	OU Admissions Office
RELATED PUBLICATIONS	Letters of invitation
SUMMARY	Invites students planning to enroll on Athens campus to attend program in May. Offers presentations by student services staff (registration, housing, financial aid, residence life) and opportunities to talk with academic advisors and pre-register for fall classes and campus tours.
COMMENTS	Offers excellent bridge between regional and "main" campus. Well focused and organized. Steadily increasing attendance: 325 in May 1992.
CONTACT	Kevin Witham

SHAWNEE STATE UNIVERSITY

PROGRAM/ACTIVITY	Math Science Academy
TARGET GROUP	High school sophomores and juniors who express a strong interest in the sciences, mathematics, and/or technologies.
DATE INITIATED	April 1991
ANNUAL COST	$120,000 (approximately $60,000 per session)
FUNDING SOURCE	U.S. Dept. of Energy and Martin Marietta Energy Systems
RELATED PUBLICATIONS	Application Packet, Program Overview
SUMMARY	The program is a six-week, two-credit hour, hands-on learning experience in the areas of biological science, engineering technologies, mathematics, and physical science. Its purpose is to create excitement and enthusiasm for the study of the sciences, while exposing the students to professionals in those areas in a college setting.
COMMENTS	We are having a problem attracting minorities in our target area. Scheduling tends to be difficult because of school extracurricular activities. The program has attracted many students who otherwise may not have the courage to attempt a college class. Several have attended from the local joint vocational schools, expressing an interest afterward in continuing studies in science and technical areas.
CONTACT	Cathy Mullins, Coordinator for Special Programs, Office of Continuing Education

SHAWNEE STATE UNIVERSITY

PROGRAM/ACTIVITY	Upward Bound
TARGET GROUP	First-generation high school students who meet eligibility requirements
DATE INITIATED	1992
ANNUAL COST	Approximately $198,000 for 1992-93
FUNDING SOURCE	U.S. Department of Education
RELATED PUBLICATIONS	
SUMMARY	The program was recently approved and is not fully operating at this time.
COMMENTS	
CONTACT	Barb Bradbury, Director

SHAWNEE STATE UNIVERSITY

PROGRAM/ACTIVITY	JOBS Student Retention Program
TARGET GROUP	ADC/JOBS Recipients
DATE INITIATED	April 1, 1991
ANNUAL COST	Undetermined, since first year included initial set-up costs.
FUNDING SOURCE	Ohio Department of Human Service
RELATED PUBLICATIONS	Program brochure, information flyer, student handbook.

SUMMARY	The program provides services that enable students to become independent and fully functioning in their curricular and extracurricular life. Many sessions held encompass self-esteem, time management, completing grants, the "college experience," study skills, memory classes, computer literacy, library orientation, etc.
COMMENTS	Students appear to be functioning better, and are better able to contact us before a situation becomes a "crisis." At the end of our first quarter, we were working with over 200 students.
CONTACT	Suzanne Shelpman, Director

SHAWNEE STATE UNIVERSITY

PROGRAM/ACTIVITY	Early Intervention
TARGET GROUP	Grades 6, 8, and 10 in two rural school districts in Scioto County
DATE INITIATED	1989
ANNUAL COST	Approximately $25,000
FUNDING SOURCE	University funds and grants
RELATED PUBLICATIONS	Pamphlets "On Your Mark, Get Set, Go"; "Exploring the Possibilities"
SUMMARY	University personnel work with students, parents, and school personnel in the two districts to promote higher education.
COMMENTS	
CONTACT	Steve Gregory, Assist. Director of Admissions

SOUTHERN STATE COMMUNITY COLLEGE

PROGRAM/ACTIVITY	Career Place (Personal Improvement Center)
TARGET GROUP	Unemployed individuals with low barriers to employment
DATE INITIATED	May 1, 1991
ANNUAL COST	$86,000
FUNDING SOURCE	Private Industry Council #17
RELATED PUBLICATIONS	
SUMMARY	This program provides individuals the opportunity to utilize resources and gain skills needed to re-enter the workforce. Individuals attend one week of classroom training and ten hours per week in the Resource Lab until employment is obtained. Assistance is provided with resume writing, application forms, cover letters, and employer contacts and referrals. Skill enhancement classes are also offered in math, reading, computers, establishing credit, and non-traditional jobs.
COMMENTS	
CONTACT	Jana Davis, Program Coordinator/Instructor

SOUTHERN STATE COMMUNITY COLLEGE

PROGRAM/ACTIVITY	Adult Basic and Literacy Education
TARGET GROUP	Less than twelfth grade educational equivalent
DATE INITIATED	September 1 each year (in operation 17 years)
ANNUAL COST	Approximately $90,000

FUNDING SOURCE	State/federal government
RELATED PUBLICATIONS	
SUMMARY	Provides free classes and materials to adults over 18 years old in the areas of literacy, GED preparation, remediation, family literacy, and workplace literacy.
COMMENTS	
CONTACT	Karyn J. Evans, ABLE Coordinator

SOUTHERN STATE COMMUNITY COLLEGE

PROGRAM/ACTIVITY Program)	The Success Center (JOBS Student Retention)
TARGET GROUP	ADC Recipients/JOBS participants attending college
DATE INITIATED	July 1, 1991
ANNUAL COST	FY 1992-93 $203,413.42
FUNDING SOURCE	Federal government, Ohio Board of Regents, and Ohio Department of Human Services
RELATED PUBLICATIONS	The Success Center Newsletter is targeted for the Center's students.
SUMMARY	The purpose of the Success Center is to provide special support services to disadvantaged ADC students attending SSCC through its JOBS Student Retention Program. These services are focused on retaining the students in college and maximizing their education and training.
COMMENTS	
CONTACT	James Daniels, Director

SOUTHERN STATE COMMUNITY COLLEGE

PROGRAM/ACTIVITY	Your Place
TARGET GROUP	Displaced homemakers
DATE INITIATED	July 1982
ANNUAL COST	Approximately $175,000
FUNDING SOURCE	Board of Regents, PIC #17, Carl Perkins, CSS, and Brown County Human Services
RELATED PUBLICATIONS	"The Fact Workbook," "Family & Career Transitions"
SUMMARY	Serves 115 displaced homemakers in a five-county area. Enhances their job skills and/or encourages increased education, helps participants adjust to new life situations, set goals, develop self-esteem and positive outlook for the future.
COMMENTS	Approximately two-thirds desire to go on to college. The remaining students desire a full-time job.
CONTACT	Karen Newby, Grants Coordinator

HOCKING COLLEGE

PROGRAM/ACTIVITY	Foundation Scholarships
TARGET GROUP	Economically disadvantaged, undergraduate students
DATE INITIATED	
ANNUAL COST	
FUNDING SOURCE	
RELATED PUBLICATIONS	
SUMMARY	Scholarships made available through voluntary staff payroll deduction program. Any first- or second-year student may apply.
CONTACT	Karen L. Diller, Director of Financial Aid

HOCKING COLLEGE

PROGRAM/ACTIVITY	District Scholars
TARGET GROUP	Economically disadvantaged, first college generation, high school students.
DATE INITIATED	
ANNUAL COST	
FUNDING SOURCE	
RELATED PUBLICATIONS	
SUMMARY	Provides tuition scholarship in the amount of the difference between tuition and student's financial aid award. Students must meet earned credit and GPA standards to maintain eligibility.

COMMENTS	
CONTACT	Diane Wolf, Red Carpet Coordinator

HOCKING COLLEGE

PROGRAM/ACTIVITY	JVS Articulation
TARGET GROUP	Specific academic programs, high school students
DATE INITIATED	
ANNUAL COST	
FUNDING SOURCE	
RELATED PUBLICATIONS	
SUMMARY	Specific programs have formally articulated credit from Joint Vocational High Schools. Examples include drafting, secretarial, accounting, electronics, hotel/restaurant management, police science, computer science, and forestry.
COMMENTS	
CONTACT	Candace S. Vancko, Dean of Admissions

HOCKING COLLEGE

PROGRAM/ACTIVITY	Tuition Work-Off
TARGET GROUP	Economically disadvantaged
DATE INITIATED	
ANNUAL COST	
FUNDING SOURCE	

RELATED PUBLICATIONS	
SUMMARY	Tuition assistance in the form of work-off is provided to students who are otherwise unable to afford college. Students usually do not qualify for financial aid nor have sufficient other resources to pay tuition.
COMMENTS	
CONTACT	Candace S. Vancko, Dean of Admissions

UNIVERSITY OF RIO GRANDE

PROGRAM/ACTIVITY	Rio Early Action Program
TARGET GROUP	Students with poor high school records or non-traditional students
DATE INITIATED	Summer 1987
ANNUAL COST	$2,000
FUNDING SOURCE	University Budget
RELATED PUBLICATIONS	
SUMMARY	Students with poor high school records are required to enter program if they wish to enroll fall quarter. The program is recommended to older students who appear to lack confidence. The program requires students to use the Learning Center and provides special counseling, communications skills, special college orientation, and regular support services.
COMMENTS	
CONTACT	Dr. Edward Sofranko

UNIVERSITY OF RIO GRANDE

PROGRAM/ACTIVITY	Summer Scholars
TARGET GROUP	High school students who have completed the junior or senior year. Junior completions must be in top half of the class.
DATE INITIATED	Summer 1980
ANNUAL COST	$12,000
FUNDING SOURCE	University Budget

RELATED PUBLICATIONS	
SUMMARY	Counselors in four-county area are informed of the program. Goal is to attract students who might not otherwise consider college. Student must pay for books and lab fees. Tuition is waived.
COMMENTS	
CONTACT	Mark Abell, Director of Admissions

UNIVERSITY OF RIO GRANDE

PROGRAM/ACTIVITY	Recruitment of unemployed adults
TARGET GROUP	Unemployed persons registered with the Bureau of Employment Services, who have no previous college.
DATE INITIATED	Spring 1987
ANNUAL COST	$30,000 less federal or state grants that can be applied to tuition.
FUNDING SOURCE	University
RELATED PUBLICATIONS	
SUMMARY	Contacts with Bureau of Employment Services. Unemployed persons with no previous college experience may enroll in technical programs in which there are vacancies. Starting time is Spring Quarter on alternate years.
COMMENTS	
CONTACT	Dr. Sanford Lane

UNIVERSITY OF RIO GRANDE

PROGRAM/ACTIVITY	Paving the Way
TARGET GROUP	Parents of junior high students
DATE INITIATED	January 1988
ANNUAL COST	$4,000
FUNDING SOURCE	University and Ohio College Association
RELATED PUBLICATIONS	Parents' Workbook
SUMMARY	A program of early intervention to encourage parental involvement. Information session for parents, designed to present academic requirements, financial aid information, admission criteria relating to college enrollment.
COMMENTS	
CONTACT	Mark Abell, Executive Director of Admissions and Enrollment

KENT STATE UNIVERSITY - SALEM

PROGRAM/ACTIVITY	Today for Tomorrow: Foundations for Success
TARGET GROUP	College freshmen who are underprepared, lack confidence, uncertain career goals.
DATE INITIATED	1986
ANNUAL COST	
FUNDING SOURCE	Ohio Board of Regents, Institutional funds
RELATED PUBLICATIONS	Promotional pamphlet
SUMMARY	A one-year program combining standard college courses with intensive work in personal development and the understanding of society and culture. The program is centered around a year-long, eight-credit-hour, multi-disciplinary core course, The Foundation of Modern Thought.
COMMENTS	
CONTACT	Admissions Office

KENT STATE UNIVERSITY - SALEM

PROGRAM/ACTIVITY	Displaced Homemakers Program
TARGET GROUP	Columbiana County displaced homemakers
DATE INITIATED	
ANNUAL COST	
FUNDING SOURCE	
RELATED PUBLICATIONS	

SUMMARY	Coordinator of Adult Admissions visits prospective students at the Columbiana County Career Center. Prospective students are invited to campus and are given individual assistance and guidance.
COMMENTS	Very successful method of recruiting and retaining this group of students.
CONTACT	Ann Willis, Coordinator of Adult Admissions and Services

KENT STATE UNIVERSITY - SALEM

PROGRAM/ACTIVITY	Salem Center for the Education of Rural Teachers
TARGET GROUP	School personnel in Columbiana County and prospective teachers
DATE INITIATED	1988
ANNUAL COST	
FUNDING SOURCE	
RELATED PUBLICATIONS	The SCERT READER--a newsletter distributed to teachers in local schools
SUMMARY	The center provides programs in undergraduate and graduate education as well as collaborative projects with local schools. Designed to promote the education of rural teachers in order to educate rural children.
COMMENTS	
CONTACT	Dr. James Cooney, Dean

KENT STATE UNIVERSITY - SALEM

PROGRAM/ACTIVITY	Linkage with GED and ABE centers
TARGET GROUP	Prospective non-traditional students

DATE INITIATED	
ANNUAL COST	
FUNDING SOURCE	
RELATED PUBLICATIONS	
SUMMARY	A part of the Ohio/Pennsylvania Higher Education Network. Supplies GED and ABE centers with information regarding admissions, financial aid, and degree programs.
COMMENTS	
CONTACT	

BELMONT TECHNICAL COLLEGE

PROGRAM/ACTIVITY	JOBS Student Retention Program
TARGET GROUP	Belmont, Harrison, Monroe, ADC-JOBS, College-bound
DATE INITIATED	January 1991
ANNUAL COST	$80,000
FUNDING SOURCE	Part of Ohio's Title II appropriation (Family Support Act 1988)
RELATED PUBLICATIONS	JOBS flyer, college catalog
SUMMARY	Reduces barriers and assists this group of individuals as they ease their way into college. Approximately 170 students served per year.
COMMENTS	This program has been very helpful to those students it serves. Retention has remained at 80-85 percent.
CONTACT	Virginia Moore, Counselor/Coordinator, JOBS Program

BELMONT TECHNICAL COLLEGE

PROGRAM/ACTIVITY	New Horizons Fine Arts Program
TARGET GROUP	Students and surrounding community members
DATE INITIATED	Fall 1990
ANNUAL COST	$10,000
FUNDING SOURCE	College funds and The Ohio Arts Council
RELATED PUBLICATIONS	Fine Arts Brochure, college catalog, special mailing, newspaper coverage, college newspaper

SUMMARY	This program has exposed approximately 2,000 people to the arts since its inception in 1990. Many people have experienced the arts in its truest form for the first time through this program. Classical, jazz, mime, theater, choral groups have been featured.
COMMENTS	
CONTACT	Vickie Whinnery

BELMONT TECHNICAL COLLEGE

PROGRAM/ACTIVITY	Trustees Scholarship Program
TARGET GROUP	Current high school graduates
DATE INITIATED	1984
ANNUAL COST	$160,000
FUNDING SOURCE	College funds
RELATED PUBLICATIONS	Application, college catalog, newspaper, billboards
SUMMARY	This program has afforded many students the opportunity to attend college and stay close to home, particularly in this area of very high unemployment.
COMMENTS	Have increased our enrollment of first-time enrolled high school graduates by approximately 3005. The program has been most effective.
CONTACT	Vickie Whinnery or Susan Galovich

BELMONT TECHNICAL COLLEGE

PROGRAM/ACTIVITY	Hilda Burrows Daarof--Opportunity Scholarship
TARGET GROUP	Any Ohio resident who has been laid off or is the spouse or child of a laid-off worker

DATE INITIATED	1986
ANNUAL COST	$47,000
FUNDING SOURCE	College funds
RELATED PUBLICATIONS	College catalog, individual flyers
SUMMARY	This program has afforded many the opportunity to attend class immediately, without waiting for funds to support their efforts, ultimately offering quicker retraining and faster return to gainful employment.
COMMENTS	The program has made college available to many students who would not have had the funds to do so.
CONTACT	Susan Galovich or Stephanie Midley

MUSKINGUM AREA TECHNICAL COLLEGE

PROGRAM/ACTIVITY	Outreach
TARGET GROUP	Potential Students
DATE INITIATED	
ANNUAL COST	Negligible
FUNDING SOURCE	
RELATED PUBLICATIONS	Catalog, technology brochures
SUMMARY	Tech Days are held each Spring at the Zanesville Mall. Faculty and administrators set up booths to demonstrate specific technological innovations and to talk about the programs at the college. Class schedules are mailed directly to residents of the three-county area each quarter. Advertisements are broadcast on TV and radio stations in the area. Each event and accomplishment that may have public interest is given space in the local papers.
COMMENTS	Very successful
CONTACT	Bruce Humphrey, Coordinator of Public Information

MUSKINGUM AREA TECHNICAL COLLEGE

PROGRAM/ACTIVITY	Muskingum Area Technical Academic Award
TARGET GROUP	High school seniors in the upper 25 percent of graduating classes in high schools of Muskingum, Guernsey, and Noble counties.
DATE INITIATED	1988
ANNUAL COST	$112,000

FUNDING SOURCE	College Board of Trustees
RELATED PUBLICATIONS	Brochure
SUMMARY	This program guarantees all tuition, general, and security fees for two consecutive years. It is open to seniors in the upper 25 percent of their graduating classes in all high schools of Muskingum, Guernsey, and Noble counties. The students must graduate during the current academic year. Deadline for applications is mid-April each year.
COMMENTS	Excellent; 88 students used the program last year.
CONTACT	Tim Shepfer, Admissions Officer

MUSKINGUM AREA TECHNICAL COLLEGE

PROGRAM/ACTIVITY	Muskingum Area Technical College Foundation
TARGET GROUP	High school graduates and seniors, and those who have obtained G.E.D. equivalent. High academic-achieving students.
DATE INITIATED	1984
ANNUAL COST	$60,000
FUNDING SOURCE	Private fundraising effort
RELATED PUBLICATIONS	Annual campaign brochure, application
SUMMARY	This private nonprofit organization is run by its own Board of Directors, who employ one part-time executive director, with clerical support from the college. The director is responsible for raising local funds to give back to the community through scholarships. The foundation currently offers 40

	scholarships per year, based on academic ability and financial need.
COMMENTS	Very helpful; 40 to 45 students receive full or partial awards annually.
CONTACT	Trafford Dick, Executive Director, MATC Foundation

MUSKINGUM AREA TECHNICAL COLLEGE

PROGRAM/ACTIVITY	Career Planning
TARGET GROUP	Junior high and high school students
DATE INITIATED	1987
ANNUAL COST	$100 (printing)
FUNDING SOURCE	General fund
RELATED PUBLICATIONS	Exploring Careers
SUMMARY	The Career Planning and Placement Office sends "Exploring Careers" to junior high schools that request these self-paced booklets. When the program first began, booklets were sent out to all junior high schools with grant funds. Budget cuts have reduced the scope of the program. One of the mental health classes visits a junior high school in Zanesville and works with seventh and eighth graders one-on-one to help with career planning.
COMMENTS	Good; the feedback from guidance counselors is that it is very helpful to them.
CONTACT	Herb Davis, Career Planning Office

JEFFERSON TECHNICAL COLLEGE

PROGRAM/ACTIVITY	Job Opportunity Basic Skills (JOBS)
TARGET GROUP	ADC Students in Jefferson, Harrison, and Carroll counties
DATE INITIATED	February 1, 1991
ANNUAL COST	$112,000
FUNDING SOURCE	Ohio Department of Human Services and Ohio Board of Regents Grant
RELATED PUBLICATIONS	Information conveyed to clients by local Department of Human Services Office.
SUMMARY	Program is new, but on track. It is modeled after the successful JTPA program. Clients meet daily with a counselor who provides encouragement, advice, and referral to other campus and community services to individuals encountering problems. A clerk was also hired to help manage the paperwork associated with the program.
COMMENTS	Students have indicated to college staff and local Department of Human Services caseworkers that they think the service is helpful. Retention rate and academic achievement of students will be analyzed.
CONTACT	Bill West, JOBS Coordinator

JEFFERSON TECHNICAL COLLEGE

PROGRAM/ACTIVITY	Jefferson Technical College Preschool
TARGET GROUP	Students, staff, and faculty members with children
DATE INITIATED	September 1985
ANNUAL COST	$38,000

FUNDING SOURCE	College funds, tuition fees, Title XX funding, JTPA
RELATED PUBLICATIONS	College catalog, preschool handbook
SUMMARY	As a means of enabling more area residents to take advantage of the training opportunities available at Jefferson Tech, the college is legally licensed to operate a preschool center and summer school-age program.
COMMENTS	Parent surveys and anecdotal records indicate high quality and necessary service is being provided.
CONTACT	Kathy Cardiff, Head Teacher

JEFFERSON TECHNICAL COLLEGE

PROGRAM/ACTIVITY	Career Counseling
TARGET GROUP	General population of Jefferson and surrounding counties
DATE INITIATED	1983
ANNUAL COST	Approximately $25,000
FUNDING SOURCE	Jefferson Technical College
RELATED PUBLICATIONS	College catalog, pamphlets, newspaper
SUMMARY	Career counseling/vocational assessment to assist in career planning. Combines conventional counseling sessions with seminars, small group discussions, use of varied career-related assessment instruments and literature, and use of computer-based Discover interactive guidance system.
COMMENTS	Client comments: "It was a real help." "The career testing helped clear things up." 1,175 participants

	(1990-91 academic year). Positive word-of-mouth advertising keeps demand for the service high.
CONTACT	Robert Mackey, M.Ed., L.P.C.

JEFFERSON TECHNICAL COLLEGE

PROGRAM/ACTIVITY	Career Awareness Presentation
TARGET GROUP	Middle, Junior, and Senior High School Students
DATE INITIATED	1988
ANNUAL COST	Approximately 15 work days per year
FUNDING SOURCE	Salary paid by Jefferson Tech
RELATED PUBLICATIONS	
SUMMARY	Presented on a county-wide basis to schools requesting it to encourage students to think seriously about the reality of the work world and how their educational attainment will have an impact on their career achievement. Covers competition in job market, programs offered by Jeff Tech, and the specific jobs to which they lead.
COMMENTS	Most students are constantly thinking about their careers, but do not always have enough information to link careers and higher education. This presentation helps to link these areas together. Counselors praise presentations highly and requests for repeat presentations are numerous.
CONTACT	Chuck Mascellino, Director of Admissions

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